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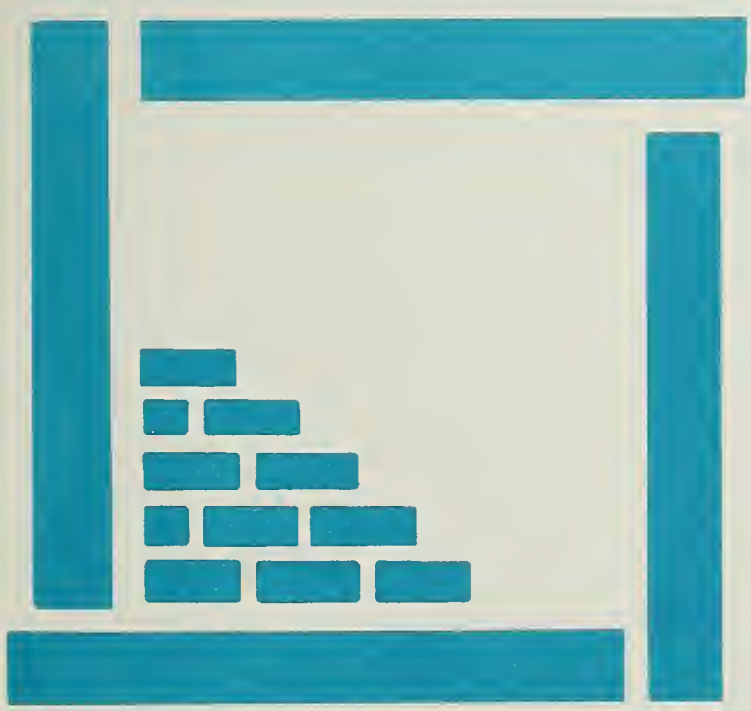
Census of Construction Industries

CC87-I-15

INDUSTRY SERIES

Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors

Industry 1743



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Many persons participated in the various activities of the 1987 Census of Construction Industries.

The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Construction Statistics Division. **Barry A. Rappaport**, Assistant Division Chief for Industry Surveys, was responsible for the overall planning, management, and coordination of the census of construction industries. Planning and implementation were under the direction of **A. William Visnansky**, Chief, Census Operations Branch, with primary staff assistance by **Juliana Van Berkum**, **Barbara J. Hadden**, **Edward R. Glover**, **Susan L. Hostetter**, **Shirley M. Baker**, and **Carolyn J. Stone**. Under the direction of **Jesse Pollock**, **Edward K. Ricketts** and **Dennis K. Duke** developed the sampling plans and variance and estimation specifications.

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If you have any questions concerning the statistics in this report, call (301) 763-7546.

1987

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Issued January 1990



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PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.

Trade associations study trends in their own and competing industries, and keep their members informed of market changes.

Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the—

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan

areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

One important change involves receipts of contractors and builders. Prior to 1987, the Census of Construction Industries collected receipts as the primary measure of construction activity. For 1987, the census collected the "value of construction work done" to better measure actual construction activity done during the year. Differences between the two concepts occur when work is done in one year and payment received either from the prior or in the succeeding year. In addition, receipts do not include work a contractor performs for its own account and use.

HISTORICAL INFORMATION

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in

other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Construction Reports* (building permits, housing starts, and value of new construction put in place), *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

CENSUS OF CONSTRUCTION INDUSTRIES—SCOPE AND CLASSIFICATION

The 1987 Census of Construction Industries covers all employer establishments (establishments with payroll) primarily engaged in contract construction, construction on their own account for sale, or in subdividing real property

into lots as defined in the 1987 Standard Industrial Classification (SIC) Manual.¹ This industrial classification system has been developed by experts on classification in government and private industry under the guidance of the Office of Management and Budget and is in general use among government agencies and among organizations outside the government.

Contract construction—The SIC manual defines construction in three broad types of activity that follow:

1. **Building construction by general contractors or by operative builders**—General building contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building projects. Operative builders who build on their own account for sale are also included here. However, investment builders who build structures on their own account for rent are classified in Real Estate.
2. **Heavy construction general contractors**—Heavy construction general contractors are primarily engaged in the construction of highways, bridges, pipelines, sewers and water lines, marine construction, power, and petro-chemical plants and other nonbuilding construction projects. Special trade contractors are classified in heavy construction if they are specifically engaged in the following activities: grading for highway and airport runways; guardrail construction; installation of highway signs; asphalt and concrete construction of roads, highways, streets and public sidewalks; trenching, cable laying; conduit construction; underwater rock removal; pipeline wrapping; or land clearing and leveling.
3. **Construction by other special trade contractors**—These contractors include plumbers, painters, carpenters, electricians, brick layers, roofers, etc. For the most part, they perform their work at the site of construction, although they may also have shops where they perform work incidental to the job site.

General contractors in both the building and the heavy construction field usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project requiring special skills or equipment. Special trade contractors may work for general contractors, for other subcontractors, or may work directly for the owner of the property.

In addition to the industries classified in the SIC manual as Construction, this census also includes one industry

classified in the Real Estate area, SIC 6552, Land Subdividers and Developers, Except Cemeteries. These establishments are engaged in subdividing real property into lots and in developing it for sale on their own account.

Each establishment receiving a questionnaire was requested to report the percent of total dollar value of business done for each kind-of-business activity engaged in during 1987. This information was used for the computer assignment of appropriate industry classifications. During this work, various tests were also made using other data reported on the questionnaire. The proportion of construction work to total business was checked to verify that the establishment was primarily in construction. Also taken into consideration were the types of structures worked on during the year and the extent of work undertaken for other contractors.

Construction establishments often engage in various construction activities. It is necessary, however, to assign a single industry code to the establishment based on its major activity. Therefore, the statistics shown for an industry reflect not only the primary activity of the establishments in the industry, but also their secondary activities. The industry reports, however, do present data on the extent of secondary activities.

A revised edition of the SIC Manual was issued in 1987. Minor modifications were made to three industries in the construction sector: SIC 1611, Highway and Street Construction Contractors, Except Elevated Highways; SIC 1629, Heavy Construction Contractors, N.E.C.; and SIC 1771, Concrete Work Special Trade Contractors. The extent of these modifications are explained in the specific texts for those industries. "Bridge tables" are also included showing selected data tabulated using both the previous classification system and the 1987 revision.

ESTABLISHMENT BASIS OF REPORTING

The census of construction industries is conducted on an establishment basis. A "construction establishment" is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such "establishment" activities include, but are not limited to estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each such establishment operated during all or any part of 1987. The census of construction industries figures represent a summary of records for individual establishments rather than for companies. The census tabulations, therefore, differ from those prepared on a company basis.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

If an establishment engaged in construction and one or more distinctly different lines of economic activity (wholesale or retail trade, service, manufacturing, mining, etc.) at the same place of business, it was requested to file a separate report appropriate to each activity, provided that the activity was of substantial size and separate records were maintained or substantially accurate estimates could be prepared.

If a separate establishment report could not be prepared for each activity, then a construction report was requested covering all activities of that establishment providing that the 1987 value of construction work exceeded the gross receipts from each of its other activities.

Construction businesses with no payroll during 1987 (nonemployers) were not required to file census reports. Tabulation of data for these businesses are based on administrative records and are shown only in U.S. summary publications and the geographic area reports series. Refer to the section on "Sample Design" for details. Foreign construction activities were not included in this census.

SAMPLE DESIGN, ESTIMATION PROCEDURES, AND RELIABILITY OF ESTIMATES

The companies included in the 1987 Census of Construction Industries were identified as part of an operation common to all 1987 Economic Censuses. Construction companies were divided into employers (companies with payroll) and nonemployers (companies without payroll). Statistical information for the employers was obtained in the census by a survey which included all medium size and large employers and a sample of the smaller ones. Census reports were not required from the nonemployers. Statistics on them were obtained from administrative records of other agencies of the Federal Government.

Employer Companies

Developing the sampling frame for employer companies—This operation started with obtaining a list of all construction companies in the active records of the Internal Revenue Service (IRS) which were subject to payment of Federal Insurance Contributions Act taxes. The basic source for this list has been the Internal Revenue Service Business Master File, a comprehensive list of companies engaged in business activities in the United States. The file contains the name, address, and form of ownership of each company and also indicates whether or not the company is subject to the FICA. Each company in this file is assigned a unique employer identification (EI) number which it uses in filing its various reports with the IRS. The Social Security Administration (SSA) maintains a similar list using the same identification numbers, which also contains information on the industrial classification of each company. The Bureau of the Census obtained both of these lists and combined them.

Under special arrangements which safeguarded the confidentiality of the information, the Bureau also obtained administrative records data on payrolls and receipts and added these data to the combined list. The list, thus created from the IRS-SSA information, was a list of employer companies. However, for the 1987 Economic Censuses the basic reporting unit is the "establishment." Therefore, steps were taken to identify the individual establishments of those companies which operate more than one place of business. The information for making this determination was obtained by means of the Company Organization Survey (COS), an annual canvass of all known multiestablishment companies and large single-establishment companies. Thus, the 1987 Economic Census list for single-establishment employer companies was obtained from the IRS-SSA, but the list of establishments of multiestablishment employer companies was obtained directly from those companies in the COS. Refer to the section on "Establishment Basis for Reporting" for details.

In general, the IRS-SSA list provided sufficient industrial classification data to assign a company to the proper economic census, but there were a number of companies for which this information was inadequate or unavailable. A special form, NC-9923, General Schedule, was mailed to all such companies, requesting information on the nature of the company's activities. From the information reported, the company was given an industrial classification code and assigned to the appropriate economic census. Since construction companies found in this way were identified only after the regular census mailing had taken place, they were treated as a supplement to the basic list.

Selecting the employer sample—The sample was designed to provide reliable State and metropolitan area estimates for each construction industry. It consisted of all construction establishments in multiestablishment companies, all single-establishment companies with estimated total employment of 20 employees or more, and a probability sample of single-establishment companies with estimated employment of fewer than 20 employees.

Supplementing the sample were construction companies identified from the NC-9923, General Schedule. Also affecting the sample were the misclassified companies; i.e., companies included in the samples of other trade areas which reported they were construction companies and companies originally classified in construction which reported they were not construction companies.

Of the 533,000 single-establishment employer companies initially classified as construction companies, 147,000 were included in the sample. All of the 13,000 establishments of multiestablishment companies were included in the sample. There was a net increase in the sample of 60,000 establishments resulting from establishments originally unclassified (receiving the NC-9923) or misclassified.

The probability sample of the smaller single-establishment companies was a stratified random sample. Strata were formed from all establishments with the same initial four-digit SIC code, in the same State, in the same metropolitan

area or in the balance of the State, and in the same size class based on estimated total employment. If the four-digit SIC code for an establishment was incomplete, the establishment was placed in a stratum for miscellaneous companies. Because they were small, all companies were included in the sample for the following three industries: SIC 1622, Bridge, Tunnel, and Elevated Highway Construction Contractors; SIC 1795, Wrecking and Demolition Work Special Trade Contractors; and SIC 1796, Installation or Erection of Building Equipment Special Trade Contractors.

Estimation procedures for 1987 and 1982 data—Since all larger employer companies and some smaller ones were included in the census, sample estimation was required only for the universe of companies not selected with certainty. The published statistics are the totals of the estimates for the sampled companies and the aggregates for the certainty companies. All estimates for 1987 and 1982 published here are simple unbiased estimates of the form:

$$x'_c = \frac{\sum_{i=1}^{n_c} x_i}{p_i}$$

where: x'_c is the simple unbiased estimate of a characteristic for a publication cell.

x_i is the reported value of a characteristic for an individual establishment in the publication cell.

p_i is the selection probability of that firm.

n_c is the number of firms in the sample for the cell.

Data for certain characteristics were reported as a percentage of the dollar value of business done. Before this formula was applied to those characteristics, it was necessary to convert the reported percentages into dollars.

Reliability of employer statistics—Since the estimates for employer establishments in these reports are based on the samples, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same forms and procedures. The sampling errors shown in the tables were estimated directly from the sample reports, using methods appropriate for the sample design and form of estimation used.

The relative standard error is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the relative standard error also partially reflects the effect of random errors of response and processing, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the

sample would differ from a complete census by less than the relative standard error. The chances are about 95 out of 100 that the difference is less than twice the relative standard error and about 99 out of 100 that it is less than 2-1/2 times the relative standard error. Individual estimates with large relative standard errors have been shown in the published tables. Any such estimates should be used with caution. The very large relative standard errors generally occur for the smaller estimates.

Relative standard errors have been calculated for all of the published statistics, although they are shown for each statistic only in the tables presenting detailed statistics. Other tables show relative standard errors only for certain characteristics because of lack of space.

As calculated for this report, the relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

A potential source of bias is in the imputation for those establishments that have not responded by the time of final publication. Data were estimated for establishments that did not report by that date, although selected establishments were contacted again to obtain as much information on the telephone as possible. Some publication cells in which more than 40 percent of the data were not reported have been suppressed.

Nonemployer Companies

As described earlier, the information derived from the business income tax returns of all companies was matched to the census employer file on the basis of common identification numbers. Those business income tax returns which could not be matched, were further classified on the basis of several characteristics. Returns with characteristics consistent with companies without payroll were treated as nonemployers. The nonemployer construction companies were not required to file census reports.

For "number of establishments," each separate income tax return was assumed to be an establishment. "All business receipts" was based on receipts information reported on the tax return.

Since no sampling was involved in the nonemployer establishments, the statistics for nonemployers are not subject to sampling variability. However, these data are subject to an unknown amount of reporting and processing errors which could not be detected by the Census Bureau.

CENSUS REPORT FORMS

Information for the 1987 Census of Construction Industries was obtained from employer establishments primarily through the use of twenty-four questionnaires, determined by industry classification and size. Standard forms and short forms were developed for each of the following SIC groups: 15, 16, 171, 172, 173, 174, 175, 176, 177, 178, and 179 and for the establishments classified in SIC 6552. Establishments with 50 or more employees all received the standard form. A sub-sample of establishments with fewer than 50 employees received short forms instead of the standard forms. The short forms covered only major items and omitted some of the detail found in the longer forms.

In reviewing and developing the questionnaires, comments and recommendations were elicited from construction trade associations and appropriate advisory groups. The Bureau surveyed several thousand firms representing all economic activities to gain insight into the way companies maintain records and to see whether new information could be collected.

DATA PROCESSING

The 1987 census report forms were mailed out in December 1987. They were mailed from and returned to the Census Bureau's Data Preparation Division in Jeffersonville, Ind., where routine editing and coding of the report forms were also accomplished. Collection of these report forms was essentially completed in July 1988.

The returned reports underwent extensive processing. A preliminary edit done at the time of data entry identified obviously deficient reports and reports needing clarification. When necessary, these problems were resolved by further contact with the respondents. Next, the data were transmitted to Census Bureau headquarters near Washington, DC.

Data records, then, underwent a detailed computer review and analysis. The records containing significant problems were referred for further analytical review and, if necessary, contacts were made with the respondents. The computer performed most classification coding (such as industry coding, geographic coding, and size coding), and imputation for missing items or for reports not received in time for tabulation. The imputation was performed on an industry (or industry group)-State (or geographic group) basis using all available response and administrative data.

The data records were then tabulated on an industry basis. Industry totals were subjected to analytical review, and selected statistics were prepared for the preliminary reports. Corrections resulting from this review were made to the computer records and final tabulations were produced.

The review of a preliminary report for an industry often uncovered the need for corrections or revisions to the data for another industry for which a preliminary report had already been published. The final reports incorporate all

revisions and corrections made during the review of the preliminary reports and contain considerable more data than were published in those reports.

GEOGRAPHIC CLASSIFICATION

Information for the 1987 Census of Construction Industries' final industry report series is classified on the basis of two types of geographic distributions: (1) physical location of the establishment, and (2) location of construction work. A separate code was assigned on each basis allowing us to present data by both physical locations of the establishment and location of construction work.

The geographic area reports series presents similar data by industry for each State (physical location of the establishment) and for selected MSA's, CMSA's and PMSA's.

DUPLICATION IN VALUE OF CONSTRUCTION WORK

The aggregate of value of construction work reported by all construction establishments in each of the several industry, geographic area, or other groupings in this census, contains varying amounts of duplication, since the construction work of one firm may be subcontracted to other construction firms and also be included in the subcontractors' value of construction work. To avoid this duplication, a "net" value of construction work figure has been derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work.

Duplication in value of business between other construction and nonconstruction industries, results from the use of products of these other industries as input materials by construction establishments. "Value added," avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or areas. "Value added," is defined in the 1987 Census of Construction Industries as equal to dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for SIC 6552 and SIC 1531 where land receipts are significant, land receipts are also subtracted from dollar value of business done.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Construction Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact and detailed specifications of the type and format of the data to be provided, should be directed to the Chief, Construction Statistics Division, Bureau of the Census, Washington, DC, 20233.

To discuss a special tabulation before submitting specifications, call 301-763-7546.

COMPARABILITY OF CENSUS OF CONSTRUCTION INDUSTRIES DATA WITH OTHER DATA

Data contained in the reports of the 1987 Census of Construction Industries are not the same as the data published in the Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity, whereas the construction census figures cover both new construction and maintenance and repair work done by establishments classified in the construction industry. Significant amounts of construction are done by establishments classified outside of construction (in real estate, manufacturing, utilities and communications, for example), both as "force account" construction and construction done for others. In addition, the value in place series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in the Census of Construction.

Data contained in the reports of the census of construction industries may also differ from industry data in "Employment and Earnings Statistics," published by the Bureau of Labor Statistics, and "Statistics of Income," published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

*	Sampling error exceeds 40 percent.
**	Represents the sum of all employees during pay periods including 12th of March, May, August, and November, divided by 4.
-	Represents zero.
†	Represents value of construction work less costs for construction work subcontracted to others. (See Duplication in Value of Construction Work.)
††	Represents dollar value of business done less costs for construction work subcontracted to others, and costs for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from dollar value of business done. (See Duplication in Value of Construction Work.)
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate, associated relative standard error, or a consistency review.
(W)	Greater than zero but less than 1 percent.
(X)	Not applicable.
n.s.k.	Not specified by kind.

Users' Guide for Locating Statistics in This Report by Table Number

Statistics	For U.S.	By State	By employment size	By size class of dollar value of business done	By type, class, ownership, kind of business, and location of construction ¹	By specialization in types of construction
Assets and depreciation (gross book value):						
Beginning of year—buildings, machinery and equipment	3					
End of year—total	1, 3	1	5	6		
End of year—buildings, machinery and equipment	3					
Depreciation charges during year—buildings, machinery and equipment	3					
Capital expenditures:						
Total capital expenditures	1, 3	1	5	6		
New buildings—machinery and equipment	3					
Used buildings—machinery and equipment	3					
Communication services, costs for	2					
Employees:						
All employees—average number	1, 2	1	5	6		8
Construction workers—average number	1, 2, 9	1, 9				
Other employees—average number	2					
Employer costs for fringe benefits—legally required and voluntary expenditures	2					
Establishments—number in business during year	1, 2, 4, 9	1, 9	5	6		8
Hours—construction workers:						
Total	1, 2, 9	1, 9	5	6		
Quarterly	2, 9	9				
Inventories	4					
Materials, components, supplies, and fuels—costs for	1, 2	1	5	6		
Payroll:						
First quarter, all employees	2					
Annual:						
All employees	1, 2	1	5	6		8
Construction workers	1, 2	1				
Other employees	2					
Power, fuels, and lubricants—costs for	2					
Proprietors and working partners	2					
Ratios, State	13	13				
Value and receipts:						
Dollar value of business done, total	2		5	6	11	
Value of construction work, total	1, 2, 4	1	5	6	2, 7, 10	8
For work subcontracted in from others	2					
Other business receipts and land receipts ²	2					
Net value of construction work	1, 2	1	5	6		8
Value added	1, 2	1	5	6		8
Rental costs:						
Total	1, 2	1	5	6		
For machinery and equipment	2					
For buildings	2					
Repairs to buildings and other structures	2					
Repairs to machinery and equipment	2					
Selected industry ratios	12					
Subcontract work to others, costs for	1, 2	1	5	6		8

Note: Data for 1982 and earlier years are also available in some of these tables.

¹Type—buildings, roads, etc. Class—new construction; additions, alterations, or reconstruction; or maintenance and repair work. Ownership—private or government owned.

²Land receipts are shown separately for SIC's 1531 and 6552 only.

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Terrazzo, Title, Marble, and Mosaic Work Special Trade Contractors

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SUMMARY OF FINDINGS

Establishments classified in this industry are primarily engaged in setting and installing ceramic tile, marble, and mosaic, and in mixing marble particles and cement to make terrazzo at the site of construction. This industry also includes contractors engaged in fresco work and mantel work. For additional examples, refer to the 1987 Standard Industrial Classification (SIC) Manual published by the Office of Management and Budget, Executive Office of the President.

During 1987, the establishments with paid employees classified in this industry accounted for \$2.32 billion in total dollar value of business. Of this amount, \$2.27 billion were for the value of construction work. These establishments paid out \$872 million for materials, components, and supplies and \$90 million for construction work subcontracted to others. Costs for selected power, fuels, and lubricants for this industry were \$37 million. Value added for 1987 was \$1.3 billion.

There were 5,089 establishments with total employment averaging 34,420 during the year. Total payroll for 1987 was \$734 million. Total hours worked by construction workers during the year were 45 million hours.

Larger establishments with 20 employees or more, while representing only 7 percent of the total number of employer establishments in this industry accounted for 47 percent of all business done.

A "construction establishment" is defined as a relatively permanent office, or other place of business, where the usual business activities related to construction are conducted. A separate census report was required from each sampled establishment covering domestic operations. Separate reports were not, however, required for each project or construction site.

In 1987, the value of construction work was collected to better measure actual construction activity done during the year. Construction receipts, as reported in earlier censuses, may have included the value of work done before or after the calendar year and may have excluded the value of work in progress during the calendar year. Receipts may have also excluded work done by builders engaged in construction for sale on their own account or for their own use. All dollar values are shown in current dollars for the years specified and have not been adjusted for inflation.

The data in this report are estimated from a sample survey and are subject to sampling variability as well as errors of response and nonreporting. The relative standard error shown in the tables is a measure of sampling variability. Descriptions of the sampling, estimating procedures, and data reliability are included in the Introduction.

Figure 1. **Value of Construction Work by Type of Construction**

(Percent)

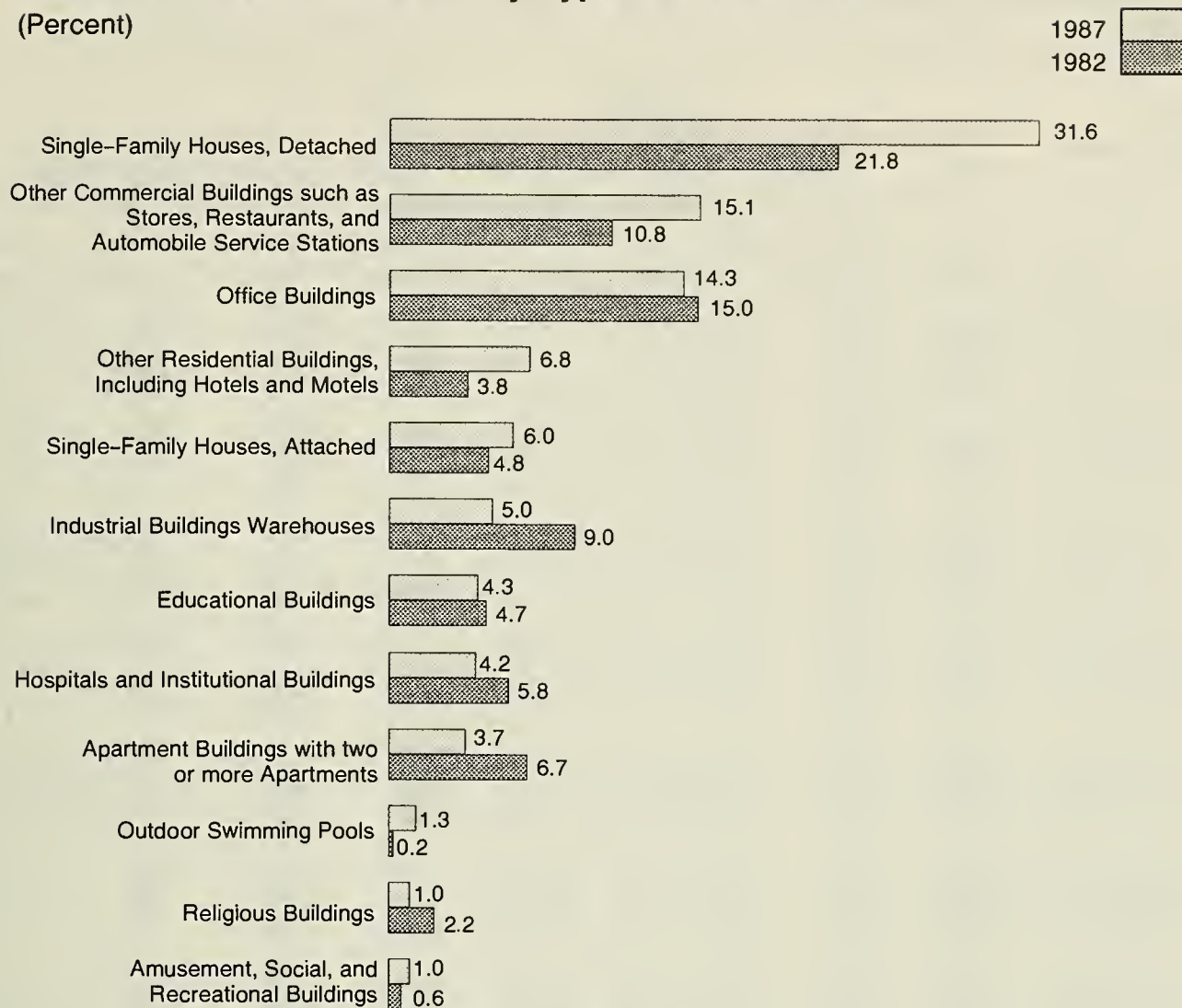


Figure 2. **Selected Costs Per Dollar Value of Business Done**

(Percent)

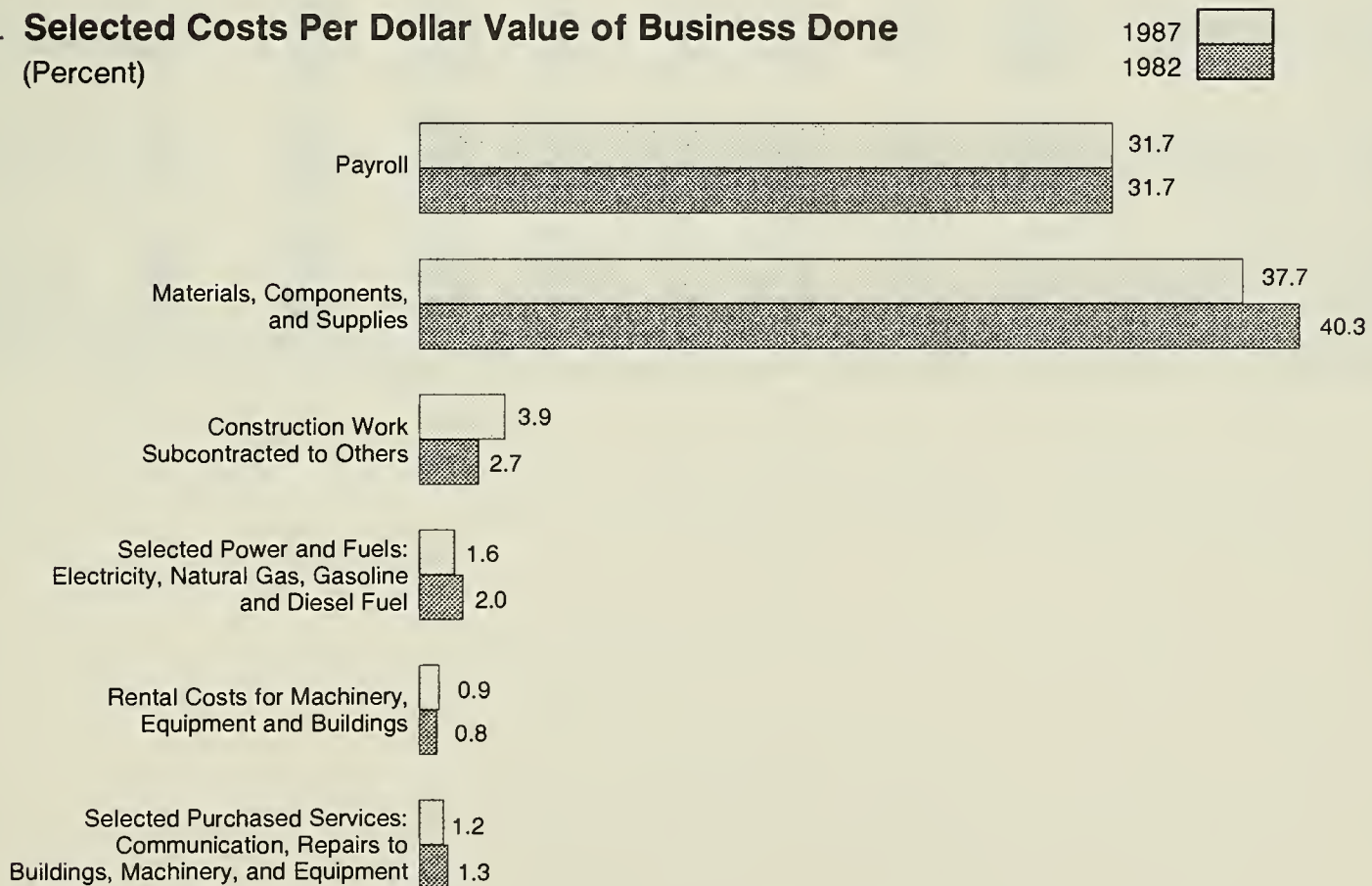


Table 1. General Statistics for Establishments With Payroll by State: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	1987							
	Number of establishments	Employees**		Payroll		Construction worker hours (thousands)	Value of construction work	Net value of construction work†
		All	Construction workers	All employees	Construction workers			
A	B	C	D	E	F	G	H	
United States	5 089	34 420	27 908	733 959	554 150	44 916	2 271 593	2 181 972
Alabama	59	409	327	7 073	4 688	609	20 931	20 269
Alaska	*12	(D)	*31	(D)	*1 134	*55	*4 331	*4 233
Arizona	146	1 083	873	17 991	13 903	1 183	46 945	46 116
Arkansas	*23	90	67	1 823	1 370	138	8 289	8 171
California	979	7 465	6 124	179 077	138 204	9 339	529 857	509 884
Colorado	31	200	160	4 951	3 652	180	14 605	14 170
Connecticut	89	301	243	7 584	5 820	461	24 668	23 780
Delaware	10	50	42	(D)	1 031	87	(D)	4 485
District of Columbia	4	(D)	34	(D)	671	65	(D)	(D)
Florida	555	3 280	2 605	56 034	42 193	4 441	200 112	185 125
Georgia	147	827	679	15 919	11 764	1 306	47 297	45 735
Hawaii	29	311	262	7 119	5 748	425	27 363	25 752
Idaho	*14	*93	*76	*1 376	*964	*65	*4 462	*4 256
Illinois	143	1 278	1 040	34 844	26 087	1 663	98 316	97 061
Indiana	30	329	269	7 493	6 142	428	21 458	21 108
Iowa	*16	237	203	3 881	2 926	279	13 133	12 455
Kansas	16	86	69	1 428	1 134	127	6 656	6 541
Kentucky	35	185	150	3 969	2 875	281	14 344	14 122
Louisiana	37	272	204	4 794	3 647	407	13 001	12 313
Maine	*15	109	89	1 858	1 424	(D)	8 854	(D)
Maryland	112	768	616	19 806	14 435	1 013	56 068	54 519
Massachusetts	101	577	481	16 256	11 926	712	44 310	42 216
Michigan	194	798	652	19 277	15 256	1 251	58 700	57 970
Minnesota	72	641	510	16 048	11 719	792	51 529	49 118
Mississippi	*22	56	49	629	518	75	2 982	2 845
Missouri	59	467	365	11 288	8 690	674	27 273	26 906
Montana	*10	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Nebraska	12	75	57	1 972	1 528	115	4 502	(D)
Nevada	29	267	213	6 075	4 441	302	17 105	17 041
New Hampshire	22	124	104	2 070	1 759	129	8 474	8 177
New Jersey	246	1 763	1 471	37 152	27 923	2 455	122 814	116 611
New Mexico	28	143	106	2 189	1 624	*214	7 783	7 681
New York	374	2 441	1 964	56 045	41 093	3 154	158 356	154 665
North Carolina	165	1 086	827	18 640	12 075	1 494	65 373	61 202
North Dakota	3	7	7	102	102	(D)	510	(D)
Ohio	124	720	590	17 803	15 024	897	63 198	59 821
Oklahoma	29	150	119	3 018	2 027	135	9 105	9 044
Oregon	46	(S)	(S)	9 526	(D)	(S)	(S)	(S)
Pennsylvania	164	976	804	22 228	17 608	1 247	76 729	74 641
Rhode Island	30	106	78	2 424	1 653	131	8 102	7 953
South Carolina	77	604	485	9 833	6 807	954	28 996	28 376
South Dakota	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Tennessee	61	743	614	12 751	8 181	979	35 730	35 183
Texas	346	2 241	1 817	38 521	28 178	2 773	124 339	117 200
Utah	52	258	209	4 852	3 967	*296	15 734	15 073
Vermont	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Virginia	153	1 495	1 234	24 807	19 446	1 915	73 017	70 434
Washington	83	388	295	8 427	6 296	457	37 573	33 628
West Virginia	10	39	27	747	523	59	3 165	3 143
Wisconsin	50	359	280	9 252	7 153	483	27 262	26 646
Wyoming	*3	(D)	20	(D)	272	31	840	785

†In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

1987—Con.						1982			Relative standard error of estimate (percent) for column—			Location of establishment
Value added††	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	All employees**	Total construction receipts¹	Value added††				
I	J	K	L	M	N	O	P	Q	B	H	M	
1 317 632	908 461	89 620	21 061	37 611	201 181	25 434	1 190 627	666 031	1	1	8	U.S.
11 873	(D)	662	198	280	2 523	242	10 209	5 421	15	13	26	AL
*2 449	(D)	98	(S)	—	(S)	(D)	(S)	(D)	(D)	55	—	AK
28 549	19 020	828	534	971	5 867	806	25 686	14 512	9	9	22	AZ
4 796	3 675	*118	39	(S)	956	*95	*3 499	*1 929	30	27	(S)	AR
319 898	198 253	19 973	6 346	8 977	47 540	3 601	192 111	112 713	3	3	12	CA
8 385	(D)	435	107	(D)	959	298	18 504	7 847	20	10	(D)	CO
14 824	(D)	888	207	575	2 648	167	9 639	5 200	7	9	16	CT
2 731	1 754	(D)	(D)	(D)	250	61	3 078	1 942	(W)	2	(D)	DE
(D)	(D)	(D)	(D)	(D)	86	(D)	(D)	(D)	(D)	(D)	(D)	DC
99 886	89 471	14 987	1 743	7 213	19 500	2 465	101 768	53 358	5	7	36	FL
25 821	20 059	1 562	300	975	5 292	622	28 640	15 209	6	6	28	GA
17 024	(D)	1 611	404	513	2 055	184	10 889	7 990	11	11	23	HI
*2 962	*1 294	*206	(S)	—	(S)	*21	*509	*205	45	50	—	ID
60 057	38 250	1 254	1 360	1 492	5 567	1 533	65 156	40 699	7	5	18	IL
12 942	8 242	350	68	213	1 537	259	12 265	7 295	7	8	18	IN
5 432	7 042	678	101	311	1 929	66	3 939	2 350	8	12	31	IA
3 091	(D)	*115	46	(D)	863	*47	*2 110	*1 053	13	12	(D)	KS
8 245	6 146	222	58	120	1 212	211	8 964	5 514	14	16	39	KY
7 609	(D)	*688	119	292	1 439	782	31 246	16 788	12	10	33	LA
3 627	4 480	(D)	(D)	(S)	(S)	*38	*2 234	*1 228	14	(D)	(S)	ME
34 026	22 137	1 549	679	414	3 780	359	17 917	9 976	9	5	19	MD
26 321	16 362	2 093	159	494	3 006	531	28 600	14 300	9	9	36	MA
34 610	23 984	730	315	987	5 039	515	28 460	16 151	10	8	30	MI
36 086	21 222	2 410	366	731	5 877	331	19 763	12 474	10	8	37	MN
1 466	(D)	*137	47	*94	*1 002	111	3 375	1 710	29	39	71	MS
16 287	(D)	366	416	510	2 554	287	12 809	7 570	15	10	21	MO
(S)	(D)	(S)	(S)	(S)	(S)	*48	*1 226	*660	(S)	(S)	(S)	MT
3 034	1 668	(D)	17	44	780	104	3 072	2 141	7	(D)	(W)	NE
10 403	6 883	64	202	467	1 265	115	6 546	3 974	13	4	28	NV
4 794	3 428	297	29	44	365	73	2 922	1 318	15	11	21	NH
73 709	44 240	6 202	965	1 788	7 423	874	41 812	23 346	4	5	22	NJ
5 041	(D)	102	75	*17	716	*286	6 692	4 104	29	30	41	NM
99 354	56 844	3 691	927	3 093	14 325	1 914	93 473	48 874	5	4	12	NY
33 913	27 339	4 170	466	1 086	5 352	722	25 920	12 820	9	9	38	NC
233	(D)	(D)	(D)	—	*3	(D)	*871	*355	(W)	(D)	—	ND
33 590	26 767	3 377	419	867	5 573	481	23 153	13 105	9	9	8	OH
4 955	(D)	60	39	(S)	2 326	228	13 442	6 825	19	15	(S)	OK
(S)	(S)	(S)	(S)	(S)	(S)	(D)	(D)	18 400	(S)	(S)	(S)	OR
43 035	32 256	2 088	417	978	5 207	748	41 004	24 011	5	4	21	PA
4 789	(D)	*149	75	116	1 605	119	4 578	2 276	11	16	22	RI
17 436	(D)	619	205	463	3 307	371	11 862	6 701	14	15	18	SC
(D)	(D)	(D)	(D)	(D)	(D)	6	217	111	(D)	(D)	(D)	SD
20 423	16 071	547	345	828	4 144	449	16 893	9 164	10	8	17	TN
69 729	48 904	7 139	1 546	800	13 485	2 813	133 929	75 045	6	7	23	TX
7 829	7 825	661	*169	*67	*1 053	240	10 694	6 240	25	27	63	UT
(D)	(D)	(D)	(D)	(D)	(D)	(S)	(S)	(S)	(D)	(D)	(D)	VT
39 531	31 737	2 583	538	423	5 407	643	24 940	12 516	5	6	6	VA
18 875	(D)	(S)	366	134	2 028	410	18 439	9 353	16	18	11	WA
2 023	(D)	22	54	48	316	50	2 362	1 628	3	3	10	WV
14 426	12 708	616	199	297	2 583	521	32 177	18 145	8	9	11	WI
420	*365	*55	7	—	—	(D)	1 155	598	(D)	32	—	WY

Table 2. Detailed Statistics for Establishments With Payroll: 1987 and Earlier Census Years

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	1977	1972	Relative standard error of estimate (percent)			
					1987	1982	1977	1972
Number of establishments in business during year	5 089	3 890	3 891	4 270	2	3	3	5
Proprietors and working partners	1 659	1 760	2 433	2 917	6	5	5	6
All employees**	34 420	25 434	22 324	30 874	1	2	2	2
Construction workers:								
March	26 761	20 333	17 921	25 002	1	2	2	3
May	28 033	21 557	19 383	26 206	1	2	2	3
August	29 017	22 215	19 857	27 547	1	2	2	3
November	27 822	21 226	19 092	26 119	1	2	2	3
Average	27 908	21 695	19 084	26 600	1	2	2	3
Other employees:								
March	6 261	3 730	3 151	4 194	2	2	2	3
May	6 251	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
August	6 720	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
November	6 812	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Average	6 511	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Construction worker hours (thousands):								
January to March	10 588	7 363	(NA)	(NA)	2	2	(NA)	(NA)
April to June	11 398	7 850	(NA)	(NA)	2	2	(NA)	(NA)
July to September	11 721	8 189	(NA)	(NA)	2	2	(NA)	(NA)
October to December	11 208	7 669	(NA)	(NA)	2	2	(NA)	(NA)
Total hours worked	44 916	31 072	(NA)	(NA)	2	2	(NA)	(NA)
Payroll, all employees	733 959	383 985	255 475	260 053	1	1	1	2
Payroll, construction workers	554 150	306 334	207 643	213 439	1	1	1	3
Payroll, other employees	179 808	77 651	47 832	46 614	2	1	1	3
First quarter payroll, all employees	163 456	86 668	55 474	(NA)	2	2	1	(NA)
Employer costs for fringe benefits, all employees	156 266	69 322	45 180	(NA)	2	2	1	(NA)
Legally required expenditures	115 855	55 396	26 220	(NA)	2	2	1	(NA)
Voluntary expenditures	40 410	13 926	18 960	(NA)	2	3	1	(NA)
Dollar value of business done	2 315 715	1 210 867	788 747	716 892	2	2	1	3
Value of construction work ¹	2 271 593	1 190 627	766 114	703 114	2	2	1	3
Value of construction work subcontracted in from others	1 317 188	692 416	534 006	403 219	2	3	2	3
Land receipts ²	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other business receipts	44 121	20 240	22 633	13 778	7	7	3	7
Net value of construction work†	2 181 972	1 158 013	750 078	684 738	1	1	1	2
Value added††	1 317 632	666 031	443 049	419 398	1	2	1	3
Selected costs	998 082	544 836	345 698	297 494	2	2	2	3
Materials, components, and supplies ³	871 938	487 683	315 856	279 118	2	2	2	3
Construction work subcontracted to others	89 620	32 614	16 036	18 376	7	4	8	9
Selected power, fuels, and lubricants	36 522	24 538	13 806	(NA)	2	3	2	(NA)
Electricity	5 156	3 140	1 487	(NA)	3	5	3	(NA)
Natural gas	1 129	953	514	(NA)	6	9	5	(NA)
Gasoline and diesel fuel	27 720	18 900	10 589	(NA)	2	3	2	(NA)
On highway use	25 953	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Off highway use	1 766	(NA)	(NA)	(NA)	8	(NA)	(NA)	(NA)
Other, including lubricating oils and greases	2 516	1 544	1 218	(NA)	5	6	6	(NA)
Rental cost for machinery, equipment, and buildings	21 061	9 349	4 527	(NA)	4	3	2	(NA)
For machinery and equipment	4 955	3 609	1 684	1 419	6	6	3	5
For buildings	16 106	5 739	2 843	(NA)	4	5	3	(NA)
Selected purchased services	26 924	15 324	13 572	(NA)	3	3	3	(NA)
Communication services	13 343	7 429	5 850	(NA)	4	3	2	(NA)
Repairs to buildings and other structures	2 104	1 070	734	(NA)	7	6	5	(NA)
Repairs to machinery and equipment	11 476	6 824	6 989	(NA)	5	4	5	(NA)
Ownership of construction projects:								
Value of construction work ¹	2 271 593	1 190 627	766 114	703 114	2	2	1	3
Government owned	209 514	116 546	108 388	171 306	4	12	2	3
Federal	71 588	(NA)	(NA)	(NA)	7	(NA)	(NA)	(NA)
State and local	137 925	(NA)	(NA)	(NA)	4	(NA)	(NA)	(NA)
Privately owned	2 062 079	1 074 080	657 727	531 808	2	2	2	3

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

²Data were collected separately for establishments classified in SIC 1531, Operative Builders, and SIC 6552, Subdividers and Developers, Except Cemeteries. For all other industries, data are included in other business receipts.

³For 1972, includes data for power, fuels, and lubricants.

Table 3. Assets, Capital Expenditures, and Depreciation for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	Relative standard error of estimate (percent)	
			1987	1982
BUILDINGS AND OTHER STRUCTURES, MACHINERY, AND EQUIPMENT				
Beginning-of-year gross book value of depreciable assets -----	169 844	108 216	3	3
Capital expenditures, other than land -----	37 611	13 902	8	6
New -----	29 948	10 939	8	6
Used -----	7 662	2 962	11	15
Retirements and disposition of depreciable assets -----	6 274	3 292	9	10
End-of-year gross book value of depreciable assets -----	201 181	118 825	3	3
Depreciation charges during year -----	23 369	15 852	4	3
Buildings and other Structures, Additions, and Related Facilities				
Beginning-of-year gross book value of depreciable assets -----	55 019	32 125	5	5
Capital expenditures, other than land -----	8 009	2 639	26	17
New buildings and other structures -----	4 670	1 931	37	15
Used buildings and other structures -----	3 338	*708	20	42
Retirements and disposition of depreciable assets -----	904	362	33	12
End-of-year gross book value of depreciable assets -----	62 124	34 402	6	5
Depreciation charges during year -----	4 454	3 197	6	5
Machinery and Equipment				
Beginning-of-year gross book value of depreciable assets -----	114 824	76 091	3	3
Capital expenditures, other than land -----	29 602	11 262	6	6
New machinery and equipment, including automobiles and trucks -----	25 278	9 008	6	6
New automobiles and trucks, intended primarily for highway use -----	19 045	6 413	6	7
Used machinery and equipment, including automobiles and trucks -----	4 324	2 254	13	13
Retirements and disposition of depreciable assets -----	5 370	2 930	8	11
End-of-year gross book value of depreciable assets -----	139 057	84 423	3	3
Depreciation charges during year -----	18 914	12 654	4	4

Table 4. Value of Inventories for Establishments With Payroll: 1987 and 1986

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Establishments with payroll	Relative standard error of estimate (percent)
All establishments:		
Number	5 089	2
Value of construction work	2 271 593	2
Establishments with inventories:		
Number	1 619	5
Value of construction work	1 343 387	3
Inventories ¹ :		
End of 1987, materials and supplies	48 393	10
End of 1986, materials and supplies	46 003	8
Establishments with no inventories:		
Number	2 797	4
Value of construction work	616 861	4
Establishments not reporting:		
Number	673	9
Value of construction work	311 345	6

¹Inventories at cost or market prior to any adjustment to correct to LIFO values.

Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with an average of—								
		1 to 4 employees	5 to 9 employees	10 to 19 employees	20 to 49 employees	50 to 99 employees	100 to 249 employees	250 to 499 employees	500 to 999 employees	1,000 employees or more
1987										
Number of establishments -----	5 089	3 361	885	479	272	73	14	4	-	-
All employees** -----	34 420	6 453	5 752	6 389	7 850	4 853	1 938	1 183	-	-
Payroll, all employees -----	733 959	99 469	105 901	137 049	192 051	129 644	48 361	21 483	-	-
Construction worker hours (thousands) -----	44 916	8 207	6 966	8 129	10 334	6 921	2 613	1 743	-	-
Dollar value of business done -----	2 315 715	467 312	349 153	410 616	540 578	346 870	134 676	66 507	-	-
Value of construction work ¹ -----	2 271 593	462 607	346 477	399 545	525 968	336 454	200 540	(D)	-	-
Net value of construction work† -----	2 181 972	432 256	332 990	389 462	508 963	325 247	193 053	(D)	-	-
Value added†† -----	1 317 632	238 477	193 659	237 170	312 348	211 632	82 979	41 365	-	-
Cost of materials, components, supplies, and fuels -----	908 461	198 483	142 007	163 362	211 225	124 031	69 352	(D)	-	-
Cost of construction work subcontracted to others -----	89 620	30 351	13 487	10 083	17 004	11 207	7 487	(D)	-	-
Rental cost for machinery, equipment, and buildings -----	21 061	2 755	3 459	4 539	5 065	3 729	1 513	(D)	-	-
Capital expenditures, other than land -----	37 611	12 030	5 471	5 047	7 551	4 400	3 109	(D)	-	-
End-of-year gross book value of depreciable assets -----	201 181	42 138	32 103	33 624	48 990	31 484	9 357	3 484	-	-
1982										
All employees** -----	25 434	5 126	4 239	5 108	5 282	2 588	3 090	(D)	(D)	-
Total construction receipts ¹ -----	1 190 627	218 343	168 804	244 223	281 938	144 116	133 202	(D)	(D)	-
Value added†† -----	666 031	116 199	95 126	139 760	159 929	77 590	77 426	(D)	(D)	-
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)										
All employees** -----	1	4	6	4	3	(W)	(W)	(W)	-	-
Net value of construction work† -----	1	4	7	4	2	(W)	(W)	(D)	-	-
Capital expenditures, other than land -----	8	17	17	10	25	15	(W)	(D)	-	-

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 6. Selected Statistics by Size Class of the Dollar Value of Business Done for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with dollar value of business done									
		Less than \$25,000	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$2,499,999	\$2,500,000 to \$4,999,999	\$5,000,000 to \$9,999,999	\$10,000,000 or more
1987											
Number of establishments -----	5 089	(S)	(S)	(S)	1 584	832	544	362	101	40	11
All employees** -----	34 420	(S)	(S)	(S)	4 662	4 483	5 667	7 566	4 546	3 376	1 957
Payroll, all employees -----	733 959	(S)	(S)	(S)	67 400	81 964	118 431	177 594	122 035	90 504	53 974
Construction worker hours (thousands) -----	44 916	(S)	(S)	(S)	5 570	5 412	7 686	9 539	6 821	4 882	2 467
Dollar value of business done -----	2 315 715	(S)	(S)	(S)	246 908	287 700	384 076	542 237	329 521	263 131	167 275
Value of construction work ¹ -----	2 271 593	(S)	(S)	(S)	244 029	286 134	376 455	528 605	320 367	421 417	(D)
Net value of construction work† -----	2 181 972	(S)	(S)	(S)	235 234	276 842	353 862	511 069	311 413	402 470	(D)
Value added†† -----	1 317 632	(S)	(S)	(S)	136 157	158 980	205 311	312 097	190 108	156 010	108 298
Cost of materials, components, supplies, and fuels -----	908 461	(S)	(S)	(S)	101 957	119 428	156 172	212 604	130 458	93 704	53 447
Cost of construction work subcontracted to others -----	89 620	(S)	(S)	(S)	8 794	9 291	22 592	17 535	8 954	13 417	5 530
Rental cost for machinery, equipment, and buildings -----	21 061	(S)	(S)	(S)	1 135	3 213	4 059	5 329	2 677	2 770	1 403
Capital expenditures, other than land -----	37 611	(S)	(S)	(S)	5 097	6 388	5 818	6 018	6 655	1 823	2 679
End-of-year gross book value of depreciable assets -----	201 181	(S)	(S)	(S)	23 126	26 959	33 363	43 096	35 827	16 576	9 814
1982											
All employees** -----	25 434	668	866	1 836	4 026	3 525	3 920	4 501	2 644	3 446	(D)
Total construction receipts ¹ -----	1 190 627	6 964	18 645	59 118	152 934	170 937	184 633	257 041	156 097	184 256	(D)
Value added†† -----	666 031	3 664	10 029	31 798	81 593	95 074	106 713	147 197	85 209	104 752	(D)
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)											
All employees** -----	1	(S)	(S)	(S)	6	7	5	3	1	(W)	(W)
Net value of construction work† -----	1	(S)	(S)	(S)	5	7	6	4	2	(W)	(D)
Capital expenditures, other than land -----	8	(S)	(S)	(S)	16	16	31	7	30	(W)	(W)

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Type of construction	Value of construction work ¹				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction ²	Maintenance and repair				
	A	B	C	D	A	B	C	D
1987								
Value of construction work ¹	2 271 593	1 617 836	404 028	153 338	2	2	3	5
Building construction	2 131 122	1 581 099	400 274	149 749	2	2	3	4
Single-family houses	852 862	646 826	152 380	53 654	3	3	5	7
Single-family houses, detached	717 487	533 409	140 320	43 757	3	3	5	7
Single-family houses, attached	135 375	113 417	12 060	9 897	7	8	10	14
Apartment buildings with two or more apartments	83 047	60 872	12 694	9 480	8	9	13	12
Other residential buildings, including hotels and motels	155 175	120 562	23 599	11 012	3	4	7	16
Hotels and motels	125 993	100 372	19 025	6 596	3	4	5	11
Other residential buildings, excluding hotels and motels	29 181	20 190	4 574	4 415	9	8	27	37
Office buildings	325 723	265 445	42 365	17 912	2	2	4	6
Other commercial buildings such as stores, restaurants, and automobile service stations	342 216	249 726	74 106	18 383	4	5	5	7
Industrial buildings and warehouses	113 849	76 883	24 646	12 319	3	4	5	7
Industrial buildings	101 479	67 703	21 652	12 123	4	4	6	7
Warehouses	12 369	9 180	2 993	196	4	6	(W)	(W)
Religious buildings	23 470	15 039	5 466	2 965	6	8	8	12
Educational buildings	98 497	65 352	21 366	11 777	5	6	8	13
Hospitals and institutional buildings	94 553	50 101	35 399	9 053	4	3	7	6
Amusement, social, and recreational buildings	22 944	17 238	3 614	2 091	4	5	7	4
Other nonresidential buildings	18 786	13 055	4 639	*1 103	23	23	34	44
Nonbuilding construction	44 080	36 737	3 753	3 589	11	12	12	2
Outdoor swimming pools	30 411	27 868	1 804	738	16	16	24	7
Heavy industrial facilities	457	267	159	*29	10	11	10	43
Sewage treatment and water treatment plants	499	451	47	-	17	18	31	-
Other nonbuilding construction	*12 713	*8 151	*1 743	*2 822	47	62	43	45
Construction work, n.s.k.	96 390	(NA)	(NA)	(NA)	11	(NA)	(NA)	(NA)
1982								
Value of construction work ¹	1 190 627	969 821	(NA)	220 805	2	2	(NA)	3
Building construction	1 033 652	838 143	(NA)	195 509	1	1	(NA)	3
Single-family houses	316 903	235 349	(NA)	81 554	3	3	(NA)	5
Single-family houses, detached	259 229	185 844	(NA)	73 385	4	4	(NA)	6
Single-family houses, attached	57 674	49 505	(NA)	8 168	5	6	(NA)	10
Apartment buildings with two or more apartments	79 883	63 331	(NA)	16 552	6	5	(NA)	12
Other residential buildings, including hotels and motels	44 697	36 678	(NA)	8 018	4	4	(NA)	12
Hotels and motels	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other residential buildings, excluding hotels and motels	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Office buildings	178 973	160 426	(NA)	18 547	2	3	(NA)	3
Other commercial buildings such as stores, restaurants, and automobile service stations	128 579	104 684	(NA)	23 895	3	4	(NA)	4
Industrial buildings and warehouses	107 741	94 712	(NA)	13 029	2	2	(NA)	5
Industrial buildings	101 753	89 347	(NA)	12 406	2	2	(NA)	6
Warehouses	5 988	5 365	(NA)	622	5	5	(NA)	9
Religious buildings	26 060	21 598	(NA)	4 462	2	3	(NA)	6
Educational buildings	55 837	45 809	(NA)	10 028	4	4	(NA)	8
Hospitals and institutional buildings	68 875	55 799	(NA)	13 076	3	3	(NA)	6
Amusement, social, and recreational buildings	7 724	6 477	(NA)	1 247	6	7	(NA)	11
Other nonresidential buildings	18 373	13 275	(NA)	5 097	11	16	(NA)	2
Nonbuilding construction	7 502	6 436	(NA)	1 065	9	10	(NA)	21
Outdoor swimming pools	2 022	1 847	(NA)	174	27	30	(NA)	31
Heavy industrial facilities	1 369	1 044	(NA)	325	6	7	(NA)	7
Sewage treatment and water treatment plants	2 010	1 673	(NA)	*337	12	8	(NA)	59
Other nonbuilding construction	2 097	1 870	(NA)	227	40	39	(NA)	26
Construction work, n.s.k.	149 473	125 241	(NA)	24 231	4	4	(NA)	4

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

²In 1982, data for additions, alterations, or reconstruction were collected separately for SIC 1521, 1522, 1531, 1541, and 1542. For all other industries, data are included with "New construction."

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work sub-contracted to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type				B	D	H
All establishments	5 089	34 420	733 959	2 271 593	1 198 440	2 181 972	1 317 632	89 620	1	2	7
Establishments not specializing by type	1 023	12 172	278 353	807 541	(NA)	780 253	475 468	27 287	2	2	10
Establishments specializing 51 percent or more	4 066	22 248	455 605	1 464 051	1 198 440	1 401 719	842 164	62 332	3	2	6
SINGLE-FAMILY HOUSES, DETACHED											
All establishments specializing in type	2 612	10 795	202 872	661 627	561 063	641 396	384 896	20 230	3	3	11
Establishments with —											
100 percent specialization	1 087	3 981	73 427	250 102	250 102	241 948	143 856	8 154	6	6	20
90 to 99 percent specialization	598	1 740	31 904	107 915	99 807	104 495	62 409	3 420	9	8	16
80 to 89 percent specialization	324	1 457	24 149	81 598	66 398	79 391	48 129	2 206	8	10	21
70 to 79 percent specialization	228	1 337	26 775	83 804	61 540	80 609	47 344	3 194	10	11	36
60 to 69 percent specialization	321	1 646	33 154	100 006	62 789	97 760	59 780	*2 246	9	9	43
51 to 59 percent specialization	53	631	13 463	38 199	20 424	37 190	23 375	1 008	13	12	9
SINGLE-FAMILY HOUSES, ATTACHED											
All establishments specializing in type	191	1 330	23 014	87 019	62 848	84 052	49 237	2 967	8	15	22
Establishments with —											
100 percent specialization	42	229	3 798	12 012	12 012	(D)	7 642	(D)	23	20	(D)
90 to 99 percent specialization	*29	*121	2 013	*5 497	4 947	*5 497	*3 147	—	41	41	—
80 to 89 percent specialization	56	113	*1 842	6 978	5 960	6 796	3 798	(S)	35	40	(S)
70 to 79 percent specialization	*17	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
60 to 69 percent specialization	45	727	11 378	43 547	26 464	41 592	23 365	1 955	7	8	30
51 to 59 percent specialization	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
APARTMENT BUILDINGS WITH TWO OR MORE APARTMENTS											
All establishments specializing in type	63	448	10 070	30 328	21 078	26 893	15 877	*3 435	15	21	52
Establishments with —											
100 percent specialization	*18	*57	*1 242	*3 208	*3 208	*3 208	*1 892	—	54	52	—
90 to 99 percent specialization	—	—	—	—	—	—	—	—	—	—	—
80 to 89 percent specialization	*7	*43	*761	*2 125	*1 806	*2 050	*828	*75	57	57	57
70 to 79 percent specialization	*21	124	2 713	8 826	*6 244	7 401	4 148	*1 425	27	39	66
60 to 69 percent specialization	*10	174	4 039	12 888	7 933	10 953	7 092	(S)	23	38	(S)
51 to 59 percent specialization	*6	*48	*1 314	*3 279	*1 886	*3 279	*1 916	—	43	41	—
HOTELS AND MOTELS											
All establishments specializing in type	37	519	10 708	42 929	29 387	39 261	22 768	3 668	18	13	19
Establishments with —											
100 percent specialization	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
90 to 99 percent specialization	—	—	—	—	—	—	—	—	—	—	—
80 to 89 percent specialization	—	—	—	—	—	—	—	—	—	—	—
70 to 79 percent specialization	*8	183	3 577	14 923	11 153	12 788	7 773	2 135	39	10	(W)
60 to 69 percent specialization	*21	146	2 555	13 014	8 062	12 032	6 811	*982	38	40	70
51 to 59 percent specialization	5	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
OTHER RESIDENTIAL BUILDINGS, EXCLUDING HOTELS AND MOTELS											
All establishments specializing in type	46	202	4 209	14 171	11 844	13 767	7 257	404	21	16	17
Establishments with —											
100 percent specialization	*10	89	1 692	6 238	6 238	*6 030	2 977	208	39	35	32
90 to 99 percent specialization	*14	*28	*140	*560	*504	*560	*336	—	45	45	—
80 to 89 percent specialization	8	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
70 to 79 percent specialization	3	44	1 997	5 868	4 107	5 688	2 982	180	(W)	(W)	(W)
60 to 69 percent specialization	*10	*25	*276	*1 049	*629	*1 049	*714	—	51	48	—
51 to 59 percent specialization	—	—	—	—	—	—	—	—	—	—	—
OFFICE BUILDINGS											
All establishments specializing in type	91	2 489	71 749	186 478	132 958	179 510	114 908	6 967	3	3	3
Establishments with —											
100 percent specialization	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
90 to 99 percent specialization	22	356	13 052	32 677	30 953	30 347	19 472	2 330	7	5	1
80 to 89 percent specialization	13	279	8 948	22 333	18 622	22 173	14 665	*160	10	12	43
70 to 79 percent specialization	16	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
60 to 69 percent specialization	20	862	19 828	51 512	31 758	49 723	30 018	1 789	5	6	9
51 to 59 percent specialization	15	587	18 807	46 394	25 326	45 961	31 042	432	7	6	7
OTHER COMMERCIAL BUILDINGS SUCH AS STORES, RESTAURANTS, AND AUTOMOBILE SERVICE STATIONS											
All establishments specializing in type	300	2 962	61 614	202 842	163 940	185 760	107 429	17 082	7	8	30
Establishments with —											
100 percent specialization	58	731	15 030	49 384	49 384	47 582	25 226	1 802	8	11	13
90 to 99 percent specialization	28	305	6 738	22 285	20 587	21 790	11 301	*494	24	24	44
80 to 89 percent specialization	96	463	9 146	44 058	37 810	33 795	16 937	*10 263	21	29	50
70 to 79 percent specialization	52	530	11 603	34 132	25 388	32 865	23 767	1 266	16	14	3
60 to 69 percent specialization	51	564	9 214	28 573	17 465	27 620	16 087	953	23	19	23
51 to 59 percent specialization	12	367	9 881	24 408	13 304	22 105	14 110	2 302	4	12	26

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987—Con.

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Appendix

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work sub-contracted to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type				B	D	H
A	B	C	D	E	F	G	H				
INDUSTRIAL BUILDINGS											
All establishments specializing in type -----	57	577	15 442	45 093	40 254	44 044	29 940	1 048	12	7	19
Establishments with —											
100 percent specialization -----	21	303	7 711	25 086	25 086	24 438	16 780	648	18	9	17
90 to 99 percent specialization -----	3	55	1 611	3 606	3 439	3 472	2 403	134	28	25	10
80 to 89 percent specialization -----	*11	83	2 701	5 276	4 220	(D)	3 767	(D)	27	16	(D)
70 to 79 percent specialization -----	*14	94	2 295	7 114	5 034	(D)	4 446	(D)	26	11	(D)
60 to 69 percent specialization -----	*7	40	1 123	4 011	2 473	3 807	2 543	(S)	36	36	(S)
51 to 59 percent specialization -----	-	-	-	-	-	-	-	-	-	-	-
EDUCATIONAL BUILDINGS											
All establishments specializing in type -----	81	364	7 790	30 554	20 681	27 015	16 359	*3 538	14	26	65
Establishments with —											
100 percent specialization -----	39	39	743	2 724	2 724	2 724	1 702	-	8	16	-
90 to 99 percent specialization -----	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
80 to 89 percent specialization -----	25	83	1 747	5 817	4 653	5 340	*3 417	477	28	34	39
70 to 79 percent specialization -----	*3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
60 to 69 percent specialization -----	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
51 to 59 percent specialization -----	*11	129	2 514	*14 442	*7 547	*11 481	6 458	(S)	25	51	(S)
OUTDOOR SWIMMING POOLS											
All establishments specializing in type -----	66	492	8 980	28 742	28 742	28 371	17 620	371	17	17	38
Establishments with —											
100 percent specialization -----	66	492	8 980	28 742	28 742	28 371	17 620	371	17	17	38
90 to 99 percent specialization -----	-	-	-	-	-	-	-	-	-	-	-
80 to 89 percent specialization -----	-	-	-	-	-	-	-	-	-	-	-
70 to 79 percent specialization -----	-	-	-	-	-	-	-	-	-	-	-
60 to 69 percent specialization -----	-	-	-	-	-	-	-	-	-	-	-
51 to 59 percent specialization -----	-	-	-	-	-	-	-	-	-	-	-

Table 9. Quarterly Construction Worker Hours and Employment for Establishments With

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Number of establishments	Average number of construction workers	Construction worker hours (thousands)	January to March		April to June	
				Construction workers ¹	Hours worked (thousands)	Construction workers ¹	Hours worked (thousands)
	A	B	C	D	E	F	G
United States	5 089	27 908	44 916	26 761	10 588	28 033	11 398
Alabama	59	327	609	333	139	334	153
Alaska	*12	*31	*55	(D)	*17	*42	(S)
Arizona	146	873	1 183	847	281	905	305
Arkansas	*23	67	138	66	29	56	*31
California	979	6 124	9 339	5 760	2 137	5 958	2 319
Colorado	31	160	180	134	34	150	46
Connecticut	89	243	461	245	119	295	129
Delaware	10	42	87	42	21	43	22
District of Columbia	4	34	65	34	15	34	16
Florida	555	2 605	4 441	2 485	1 040	2 570	1 116
Georgia	147	679	1 306	695	320	686	320
Hawaii	29	262	425	222	79	232	101
Idaho	*14	*76	*65	*101	*19	*72	*11
Illinois	143	1 040	1 663	949	353	1 008	378
Indiana	30	269	428	238	91	278	113
Iowa	*16	203	279	140	61	160	61
Kansas	16	69	127	73	40	68	28
Kentucky	35	150	281	132	58	160	70
Louisiana	37	204	407	228	110	224	114
Maine	*15	89	(D)	87	(D)	91	(D)
Maryland	112	616	1 013	614	257	593	268
Massachusetts	101	481	712	447	167	535	192
Michigan	194	652	1 251	576	292	637	338
Minnesota	72	510	792	537	193	499	196
Mississippi	*22	49	75	46	16	47	18
Missouri	59	365	674	363	164	371	172
Montana	*10	(S)	(S)	(S)	(S)	(S)	(S)
Nebraska	12	57	115	54	23	55	27
Nevada	29	213	302	186	71	216	75
New Hampshire	22	104	129	103	32	110	32
New Jersey	246	1 471	2 455	1 421	597	1 507	621
New Mexico	28	106	*214	138	*67	99	*43
New York	374	1 964	3 154	1 803	750	2 020	824
North Carolina	165	827	1 494	825	343	829	373
North Dakota	3	7	(D)	(D)	(D)	(D)	(D)
Ohio	124	590	897	616	244	590	227
Oklahoma	29	119	135	122	34	132	33
Oregon	46	(S)	(S)	(S)	(S)	(S)	(S)
Pennsylvania	164	804	1 247	722	282	798	306
Rhode Island	30	78	131	83	35	86	38
South Carolina	77	485	954	481	210	471	242
South Dakota	3	(D)	(D)	(D)	(D)	(D)	(D)
Tennessee	61	614	979	622	230	690	262
Texas	346	1 817	2 773	1 823	711	2 005	800
Utah	52	209	*296	244	*85	199	65
Vermont	2	(D)	(D)	(D)	(D)	(D)	(D)
Virginia	153	1 234	1 915	1 169	431	1 240	472
Washington	83	295	457	292	105	270	117
West Virginia	10	27	59	22	12	27	13
Wisconsin	50	280	483	224	94	275	117
Wyoming	*3	20	31	23	8	23	8

¹Construction workers during pay periods including 12th of March, May, August, and November.

Payroll by State: 1987

July to September		October to December		Relative standard error of estimate (percent) for column—										Location of establishment
Construction workers¹	Hours worked (thousands)	Construction workers¹	Hours worked (thousands)											
H	I	J	K	B	C	D	E	F	G	H	I	J	K	
29 017	11 721	27 822	11 208	1	2	1	2	1	2	1	2	1	2	U.S.
329	162	313	153	15	22	15	22	15	21	15	22	14	23	AL
44	(S)	(D)	*3	42	71	(D)	66	54	(S)	34	(S)	(D)	50	AK
889	325	852	271	10	13	7	13	9	14	10	15	14	13	AZ
71	40	74	37	31	35	40	40	37	43	29	33	22	27	AR
6 500	2 491	6 278	2 391	3	3	3	3	3	4	3	4	3	4	CA
160	53	193	45	20	4	18	6	16	4	15	5	29	6	CO
222	106	209	106	8	8	10	7	14	14	6	8	8	8	CT
43	21	42	21	(W)	1	(W)	3	(W)	1	(W)	1	(W)	1	DE
35	17	33	15	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	(W)	DC
2 806	1 172	2 558	1 112	5	7	5	7	5	7	6	7	5	7	FL
699	352	636	312	6	8	7	8	6	9	6	8	6	8	GA
300	123	293	121	11	12	11	12	14	14	13	11	9	12	HI
59	*16	*72	*18	43	58	48	64	46	47	38	57	41	60	ID
1 089	480	1 116	450	7	7	7	7	7	8	7	7	8	8	IL
285	116	275	107	8	7	8	7	8	7	7	7	9	8	IN
243	83	270	73	5	14	7	9	6	11	4	17	5	22	IA
70	28	68	30	12	24	7	33	8	17	15	24	19	20	KS
154	77	157	74	12	17	14	17	13	17	11	16	12	16	KY
186	95	179	87	12	13	11	10	13	12	15	20	17	19	LA
92	(D)	87	(D)	17	(D)	17	(D)	17	(D)	17	(D)	17	(D)	ME
727	250	529	237	9	7	5	7	6	8	18	6	7	8	MD
486	173	456	178	9	14	11	15	12	16	9	14	8	18	MA
659	313	736	306	10	13	9	14	11	16	10	15	11	13	MI
529	213	473	189	9	14	10	15	9	13	8	14	8	15	MN
49	19	54	21	28	29	35	38	29	31	24	24	26	26	MS
372	169	356	166	13	17	14	19	13	16	13	17	13	16	MO
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	MT
59	30	62	33	6	5	9	7	6	6	5	5	5	5	NE
212	78	237	76	12	15	13	17	11	15	14	17	12	14	NV
102	33	103	32	18	6	16	6	22	6	17	6	17	6	NH
1 510	625	1 446	610	4	5	4	6	4	5	4	5	5	6	NJ
101	*57	88	46	34	46	39	49	34	52	31	44	30	38	NM
1 962	771	2 072	807	5	7	5	7	5	6	5	6	6	8	NY
819	384	833	392	10	12	10	11	10	12	10	13	10	13	NC
(D)	(D)	10	(D)	(W)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(W)	(D)	ND
602	216	553	210	9	4	8	4	8	5	9	4	10	6	OH
109	32	111	36	21	21	22	20	26	21	18	19	20	25	OK
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	OR
856	325	840	333	4	5	5	6	4	6	5	6	5	6	PA
79	32	64	25	13	11	13	11	11	9	16	16	13	15	RI
539	269	448	230	14	13	17	13	14	13	13	12	13	14	SC
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	SD
598	248	546	238	11	11	13	13	15	12	7	8	8	11	TN
1 816	676	1 624	584	6	6	6	6	6	6	7	6	8	7	TX
173	*61	219	*84	26	42	32	44	23	40	22	42	27	45	UT
(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	VT
1 299	507	1 227	504	6	8	6	8	6	8	6	8	7	9	VA
333	127	285	106	16	26	16	26	18	28	15	26	17	26	WA
34	17	28	16	4	3	6	5	5	10	4	4	(W)	4	WV
319	138	304	132	8	6	10	6	9	7	8	7	8	7	WI
18	6	19	7	32	32	37	37	37	37	24	24	30	30	WY

Table 10. Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of construction work	1987					1982 construction receipts for work done in this State¹	Percent change 1987 (col A) to 1982 (col F)	Relative standard error of estimate (percent) for column—		
	Value of construction work done in this State¹	Construction work done by establishments located in this State		Construction work done by establishments not located in this State						
		Number	Value of construction work	Number	Value of construction work					
A	B	C	D	E	F	G	A	C	E	
United States -----	2 271 593	5 050	2 113 731	1 221	157 861	1 190 627	90.8	2	2	3
Alabama -----	19 069	59	18 484	35	584	16 960	12.4	13	14	10
Alaska -----	*5 536	*12	(D)	2	(D)	(D)	(D)	43	(D)	(D)
Arizona -----	49 082	146	46 892	8	2 190	(D)	(D)	8	9	(W)
Arkansas -----	8 710	23	8 120	23	*589	5 890	47.9	25	26	59
California -----	533 007	979	527 232	16	5 775	200 092	166.4	4	4	1
Colorado -----	15 591	31	14 456	6	1 135	17 686	-11.8	9	9	(W)
Connecticut -----	24 685	84	22 572	37	2 112	11 609	112.6	9	10	7
Delaware -----	5 198	10	4 401	12	796	3 683	41.1	3	3	10
District of Columbia -----	15 283	4	(D)	53	(D)	(D)	(D)	2	(D)	(D)
Florida -----	206 982	555	197 807	51	9 174	109 849	88.4	7	7	10
Georgia -----	46 622	147	42 913	44	3 709	30 496	52.9	6	7	8
Hawaii -----	27 440	29	(D)	1	(D)	(D)	(D)	11	(D)	(D)
Idaho -----	*3 571	14	*3 321	5	250	*575	521.0	50	54	4
Illinois -----	97 234	142	89 304	62	7 929	58 205	67.1	5	6	8
Indiana -----	21 136	30	20 879	*16	257	14 679	44.0	8	8	14
Iowa -----	7 386	16	6 957	9	428	3 077	140.0	19	20	(W)
Kansas -----	7 358	16	5 432	21	1 926	3 552	107.2	11	15	3
Kentucky -----	14 213	33	13 052	*19	1 161	11 294	25.8	15	17	13
Louisiana -----	14 121	37	12 913	*31	1 207	26 562	-46.8	11	12	36
Maine -----	8 941	*15	(D)	*2	(D)	(D)	(D)	8	(D)	(D)
Maryland -----	48 076	111	37 839	59	10 237	18 718	156.8	5	7	5
Massachusetts -----	46 160	100	42 804	26	3 355	23 523	96.2	9	9	36
Michigan -----	58 799	194	57 780	*9	1 018	28 369	107.3	8	8	8
Minnesota -----	50 897	71	(D)	3	(D)	18 325	177.7	8	(D)	(D)
Mississippi -----	3 568	22	2 928	19	639	*3 102	15.0	32	39	6
Missouri -----	25 794	59	24 729	21	1 064	12 394	108.1	10	10	6
Montana -----	2 445	10	(D)	1	(D)	(D)	(D)	30	(D)	(D)
Nebraska -----	6 401	12	4 377	*8	*2 024	3 081	107.8	20	6	60
Nevada -----	15 406	29	15 276	*8	130	8 267	86.4	4	4	13
New Hampshire -----	8 577	22	8 452	8	124	3 273	162.1	12	12	24
New Jersey -----	126 188	245	107 993	77	18 195	44 616	182.8	5	5	11
New Mexico -----	7 600	28	7 600	-	-	5 757	32.0	31	31	-
New York -----	164 044	368	146 327	40	17 717	78 233	109.7	4	5	11
North Carolina -----	58 497	161	55 917	43	2 580	22 474	160.3	10	11	9
North Dakota -----	504	3	504	-	-	1 914	-73.7	(W)	(W)	-
Ohio -----	53 328	123	52 509	24	818	21 134	152.3	9	9	15
Oklahoma -----	12 409	29	8 891	51	3 517	17 688	-29.8	12	15	19
Oregon -----	25 371	45	24 854	*28	517	(D)	(D)	4	4	34
Pennsylvania -----	67 255	156	60 563	47	6 692	33 731	99.4	5	5	11
Rhode Island -----	7 008	24	6 949	3	59	3 130	123.9	23	23	25
South Carolina -----	29 437	77	26 187	28	3 250	13 188	123.2	15	17	6
South Dakota -----	(D)	3	(D)	-	-	(D)	(D)	(D)	(D)	-
Tennessee -----	36 367	61	31 869	45	4 497	19 229	89.1	8	9	14
Texas -----	121 361	346	119 044	51	2 316	125 027	-2.9	8	8	16
Utah -----	12 709	52	12 410	4	299	9 495	33.8	22	23	(W)
Vermont -----	(D)	2	(D)	4	173	(D)	(D)	(D)	(D)	(W)
Virginia -----	86 332	153	69 380	87	16 951	28 251	205.6	5	7	4
Washington -----	37 699	83	35 568	*10	*2 130	17 421	116.4	22	23	54
West Virginia -----	3 924	10	3 045	*18	878	3 393	15.6	8	4	34
Wisconsin -----	21 133	50	20 259	28	873	26 385	-19.9	11	11	8
Wyoming -----	995	*3	(D)	2	(D)	1 884	-47.2	29	(D)	(D)

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 11. Dollar Value of Business Done for Establishments With Payroll by Kind of Business Activity: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Primary and other kinds of business activities	Dollar value of business done ¹		Relative standard error of estimate (percent)	
	1987	1982	1987	1982
All kinds of business.....	2 315 715	1 210 867	2	2
Masonry contractor	63 380	20 174	4	2
Marble contractor, exterior	41 558	(NA)	6	(NA)
Masonry contractor, block and brick	10 768	(NA)	8	(NA)
Stonework contractor	11 054	(NA)	6	(NA)
Drywall contractor	3 200	492	15	29
Plastering contractor	4 659	2 924	24	24
Marble contractor, interior	280 967	(NA)	4	(NA)
Mosaic contractor	6 279	(NA)	22	(NA)
Terrazzo contractor	123 781	94 394	5	5
Tile setting contractor	1 685 847	894 179	2	2
Floor covering contractor, except wood	14 563	45 754	6	5
Computer or resilient floor installation contractor	4 934	(NA)	7	(NA)
Linoleum, asphalt or vinyl tile installation contractor	9 629	(NA)	13	(NA)
Flooring contractor, wood	3 789	1 592	5	15
Concrete construction	2 932	805	(W)	12
Other construction activities	48 425	90 225	4	3
Manufacturing	5 825	970	17	33
Retail trade	23 541	6 410	7	16
Wholesale trade	4 112	2 663	15	7
Other activities	8 525	50 285	6	38
Kind of business activity, n.s.k.	35 890	(S)	12	(S)

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 12. Selected Industry Ratios for Establishments With Payroll: 1987 and 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	1987	1982	Relative standard error of estimate (percent) for 1987
AVERAGE PER ESTABLISHMENT			
Number of employees**	6.8	6.5	2
Number of construction workers	5.5	5.6	2
Number of all other employees	1.3	(NA)	2
Payroll, all employees \$1,000	144.2	98.7	2
Payroll, construction workers do	108.9	78.7	2
Payroll, other employees do	35.3	20.0	2
Dollar value of business done do	455.0	311.3	2
Value of construction work ¹ do	446.4	306.1	2
Cost of materials, components, supplies, and fuels do	178.5	131.7	2
Construction work subcontracted to others do	17.6	8.4	7
Rental cost for machinery, equipment, and buildings do	4.1	2.4	4
Capital expenditures, other than land do	7.4	3.6	8
Gross book value of depreciable assets do	39.5	30.5	4
AVERAGE PER EMPLOYEE			
Payroll, all employees do	21.3	15.1	1
Dollar value of business done do	67.3	47.6	1
Value added†† do	38.3	26.2	1
AVERAGE PER CONSTRUCTION WORKER			
Payroll, construction workers do	19.9	14.1	1
Value of construction work ¹ do	81.4	54.9	1
Construction worker hours	1 609.4	1 432.2	1
AVERAGE PER OTHER EMPLOYEE			
Payroll, other employees \$1,000	27.6	(NA)	1
AVERAGE PER DOLLAR VALUE OF CONSTRUCTION WORK¹			
Payroll, all employees	.323	.323	1
Cost of materials, components, supplies, and fuels	.400	.430	1
Cost of construction work subcontracted to others	.039	.027	7
Rental cost for machinery, equipment, and buildings	.009	.008	3

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 13. Selected Industry Ratios for Establishments With Payroll by State: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Average number of employees** per establishment	Payroll per employee (\$1,000)	Construction worker hours per construction worker	Value of construction work per construction worker (\$1,000)	Average per dollar of value of construction work			
					Payroll, all employees	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings
United States -----	6.8	21.3	1 609.4	81.4	.323	.400	.039	.009
Alabama -----	6.9	17.3	1 862.4	64.0	.338	(D)	.032	.009
Alaska -----	(D)	(D)	*1 774.2	*139.7	(D)	(D)	*.023	(S)
Arizona -----	7.4	16.6	1 355.1	53.8	.383	.405	.018	.011
Arkansas -----	*3.9	20.3	2 059.7	123.7	.220	.443	*.014	.005
California -----	7.6	24.0	1 525.0	86.5	.338	.374	.038	.012
Colorado -----	6.5	24.8	1 125.0	91.3	.339	(D)	.030	.007
Connecticut -----	3.4	25.2	1 897.1	101.5	.307	(D)	.036	.008
Delaware -----	5.0	(D)	2 071.4	(D)	(D)	(D)	(D)	(D)
District of Columbia -----	(D)	(D)	1 911.8	(D)	(D)	(D)	(D)	(D)
Florida -----	5.9	17.1	1 704.8	76.8	.280	.447	.075	.009
Georgia -----	5.6	19.2	1 923.4	69.7	.337	.424	.033	.006
Hawaii -----	10.7	22.9	1 622.1	104.4	.260	(D)	.059	.015
Idaho -----	*6.6	*14.8	*855.3	*58.7	*.308	*.290	*.046	(S)
Illinois -----	8.9	27.3	1 599.0	94.5	.354	.389	.013	.014
Indiana -----	11.0	22.8	1 591.1	79.8	.349	.384	.016	.003
Iowa -----	*14.8	16.4	1 374.4	64.7	.296	.536	.052	.008
Kansas -----	5.4	16.6	1 840.6	96.5	.215	(D)	*.017	.007
Kentucky -----	5.3	21.5	1 873.3	95.6	.277	.428	.015	.004
Louisiana -----	7.4	17.6	1 995.1	63.7	.369	(D)	*.053	.009
Maine -----	*7.3	17.0	(D)	99.5	.210	.506	(D)	(D)
Maryland -----	6.9	25.8	1 644.5	91.0	.353	.395	.028	.012
Massachusetts -----	5.7	28.2	1 480.2	92.1	.367	.369	.047	.004
Michigan -----	4.1	24.2	1 918.7	90.0	.328	.409	.012	.005
Minnesota -----	8.9	25.0	1 552.9	101.0	.311	.412	.047	.007
Mississippi -----	*2.5	11.2	1 530.6	60.9	.211	(D)	*.046	.016
Missouri -----	7.9	24.2	1 846.6	74.7	.414	(D)	.013	.015
Montana -----	(S)	(S)	(S)	(S)	(S)	(D)	(S)	(S)
Nebraska -----	6.3	26.3	2 017.5	79.0	.438	.371	(D)	.004
Nevada -----	9.2	22.8	1 417.8	80.3	.355	.402	.004	.012
New Hampshire -----	5.6	16.7	1 240.4	81.5	.244	.405	.035	.003
New Jersey -----	7.2	21.1	1 668.9	83.5	.303	.360	.050	.008
New Mexico -----	5.1	15.3	*2 018.9	73.4	.281	(D)	.013	.010
New York -----	6.5	23.0	1 605.9	80.6	.354	.359	.023	.006
North Carolina -----	6.6	17.2	1 806.5	79.0	.285	.418	.064	.007
North Dakota -----	2.3	14.6	(D)	72.9	.200	(D)	(D)	(D)
Ohio -----	5.8	24.7	1 520.3	107.1	.282	.424	.053	.007
Oklahoma -----	5.2	20.1	1 134.5	76.5	.331	(D)	.007	.004
Oregon -----	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Pennsylvania -----	6.0	22.8	1 551.0	95.4	.290	.420	.027	.005
Rhode Island -----	3.5	22.9	1 679.5	103.9	.299	(D)	*.018	.009
South Carolina -----	7.8	16.3	1 967.0	59.8	.339	(D)	.021	.007
South Dakota -----	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Tennessee -----	12.2	17.2	1 594.5	58.2	.357	.450	.015	.010
Texas -----	6.5	17.2	1 526.1	68.4	.310	.393	.057	.012
Utah -----	5.0	18.8	*1 416.3	75.3	.308	.497	.042	*.011
Vermont -----	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Virginia -----	9.8	16.6	1 551.9	59.2	.340	.435	.035	.007
Washington -----	4.7	21.7	1 549.2	127.4	.224	(D)	(S)	.010
West Virginia -----	3.9	19.2	2 185.2	117.2	.236	(D)	.007	.017
Wisconsin -----	7.2	25.8	1 725.0	97.4	.339	.466	.023	.007
Wyoming -----	(D)	(D)	1 550.0	42.0	(D)	*.435	*.065	.008

APPENDIX A.

Explanation of Terms

Construction—Is composed of three broad categories:

1. **New construction**—Includes the complete, original erection of structures and essential service facilities and the initial installation of integral equipment such as elevators, and plumbing, heating, and air-conditioning supplies and equipment.
2. **Additions, alterations or reconstruction**—Includes construction activity making structural changes to existing facilities. Generally, this type of activity is considered a capital investment in the property.
3. **Maintenance and repair**—Includes construction done for the purpose of upkeep of property rather than additional investment in the property.

Examples of the general distinction between maintenance and repair and reconstruction are provided here: roof repairs, including the replacement of shingles, gutters, etc., are classified under maintenance and repairs. A complete reroofing, however, is classified as reconstruction.

Number of establishments in business during year—Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments which were inactive or idle for the entire year were not included.

Proprietors and working partners—These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

All employees—Comprise all full-time and part-time employees on the payrolls of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not.

All employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

Construction workers—Includes all workers up through the working foreman level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment

operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category but are included in the "other employees" category.

Other employees—Includes employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

Construction worker hours—Includes the total number of hours worked by construction workers. Construction worker hours were collected for each of the four quarters of 1987.

Payroll—Includes the gross earnings paid in the calendar year 1987 to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if an unincorporated concern.

Employer costs for fringe benefits (supplemental labor costs)—Represents expenditures made by the employer during 1987 for legally required and voluntary fringe benefit programs for employees.

Legally required contributions—Include Social Security contributions, unemployment compensation, workman's compensation, and State temporary disability payments.

Voluntary payments—Include life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Dollar value of business done comprises the following detail:

Value of construction work done—Includes all value of construction work done during 1987 for construction work performed by general contractors, special trades contractors, subcontractors, and land development and improvement work. Included is new construction, additions and alterations or reconstruction, and maintenance and repair construction work. Also included is the value of any construction work done by the reporting establishments for themselves.

Builders were instructed to include the value of buildings and other structures built or being built for sale in 1987 but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease.

Establishments engaged in the sale and installation of such construction components as plumbing, heating, and central air conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators, etc., were instructed to include both the value for the installation and the receipts covering the price of the items installed.

Excluded was the cost of industrial and other specialized machinery and equipment which are not an integral part of a structure.

Land receipts—Includes receipts from the sale of land, whether held for sale or sold in connection with the sale of houses and other structures. It excludes the value of any improvements made to the land prior to the sale. (That value was to be included in the value of construction work done.)

Other business receipts—Includes business receipts not reported as value of construction work done or land receipts. The item includes business receipts from retail and wholesale trade, rental of equipment, manufacturing, transportation, legal service, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here.

Excluded was the value of construction work done and receipts from other business operations in foreign countries and non-operating income such as interest and dividends.

Net value of construction work—Derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Value added—Derived for each establishment, value added is equal to dollar value of business done, less costs for construction work subcontracted to others, and costs for materials, components, supplies and fuels. For SIC 6552 and SIC 1531, for which land receipts are significant, land receipts are also subtracted from dollar value of business done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Selected costs—Represents the costs for materials, components, and supplies; costs for construction work subcontracted to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

Costs for materials, components, and supplies include:

- total costs to reporting establishments during 1987 for the purchase of all materials, components, and supplies, except fuels. (Supplies include expendable tools which are charged to current accounts.)
- freight and other direct charges should represent only amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company.
- costs for materials, components, and supplies used by the reporting establishments in the construction or reconstruction of buildings/structures for themselves which are chargeable to their fixed assets accounts, are included in this item as are costs for materials bought and resold to others.
- costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use.

Excluded from this item are:

- industrial and other specialized machinery and equipment, such as printing presses; computer systems; etc., which are not an integral part of a structure
- materials furnished to contractors by the owners of projects.

Costs for construction work subcontracted to others include:

- all costs during 1987 for construction work subcontracted out to other construction contractors.

Excluded from this item are:

- The costs to the reporting establishment for its purchases of materials, components, and supplies, provided to a subcontractor for his use. Such costs are reported under a separate category, "costs for materials, components, and supplies."
- costs for the rental of machinery or equipment.

Costs for selected power, fuels, and lubricants include:

- costs for fuels, lubricants, and electric energy purchased during the year from other companies, or received from other establishments of the company.
- costs for natural and manufactured gas, fuel oil, coal and coke products, etc.

Rental costs for machinery, equipment, and buildings—Includes all costs during 1987 for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It

excludes costs for the rental of land. It also excludes costs under agreements which, in effect, are conditional sales contracts such as capital leases. Such costs are included in "capital expenditures."

Selected purchased services—Includes all costs during 1987 for communication services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies, or from other establishments of the same company. It includes only the cost of that repair necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property, or the cost of adapting it for another use. Such costs are included in "capital expenditures".

Assets and depreciation—Refers to the original cost of all fixed tangible assets such as buildings and other structures (offices, shops, etc.); stationary machinery (generators, shop equipment, etc.); mobile machinery (tractors, trucks, etc.); and other equipment (office furniture and fixtures, etc.). Not included are such items as current assets, depletable assets, intangible assets, and nondepreciable assets.

Data on assets and depreciation were collected separately for: (1) buildings and other structures, additions, and related facilities; and, (2) machinery and equipment.

Respondents were also asked to report capitalized expenditures, depreciation charges, and the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987.

Capital expenditures—Refers to all costs actually incurred during 1987 which were or would be chargeable to the fixed assets accounts of the reporting establishments and which were of the type for which depreciation accounts are ordinarily maintained. These expenditures cover the acquisition, the construction, and the major alteration of the reporting establishment's own buildings and other structures, whether purchased, constructed under contract, or constructed by the reporting establishment's own forces; and the acquisition of machinery and equipment.

If leasing arrangements met the criteria set down by the Financial Accounting Standards Board (FASB) for a capital lease, respondents were instructed to report the original cost or market value of that equipment or building as a fixed asset and capital expenditure if acquired during 1987.

If capital expenditures were not recorded directly at the establishment level but handled centrally at the company or division level, respondents were requested to report appropriate estimates for the individual establishments.

Inventories—Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others, but held by the reporting establishment.

Builders who built on their own account for sale were requested to report work in progress and finished units not sold for buildings and other structures built for sale.

Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

Ownership of construction projects—This item shows the distribution of the value of construction work done by ownership of the project, that is, Government owned or privately owned. This classification relates to the ownership of the projects or work undertaken during the construction phase. Government owned projects are shown separately for Federal, and State and local governments.

Value of construction work subcontracted in from others—Includes the value of construction work during 1987 for work done by reporting establishments for other construction contractors or builders. Establishments were asked to report the approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

Types of construction—This item provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in 1987. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function. For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose, i.e, office and residential, or commercial, they were to classify the building by major purpose.

In addition all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types. See the definition of "Construction" for the meanings of these terms.

Building construction:

- **Single-family houses, detached**—Includes all residential buildings constructed for one family use.
- **Single-family houses, attached (include townhouses)**—Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken wall from ground to roof.
- **Apartment buildings with two or more apartments**—Includes high-rise, low-rise, or any structures containing two or more housing units (excluding attached single-family houses and townhouses described above).
- **Hotels and motels**—Includes hotels, motels, and tourist cabins intended for transient accommodations.

- **Other residential buildings**—Includes dormitories, fraternity and sorority houses, nurses homes, and other nonhousekeeping residential structures.
- **Office buildings**—Includes all buildings which are used primarily for office space or for government administrative offices. Also included are banks or financial buildings which are three stories or more.
- **Other commercial buildings, such as stores, restaurants, and automobile service stations**—Includes all buildings which are intended for use primarily in the wholesale, retail, and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Industrial buildings**—Includes all industrial buildings and plants which are used to house production and assembly activities. Heavy industrial facilities such as blast furnaces, petroleum refineries, chemical complexes, etc., are not included in this category, but under nonbuilding construction.
- **Warehouses**—Includes commercial warehouses, cold storage plants, grain elevators, mini-warehouses, and other such storage buildings.
- **Religious buildings**—Includes all buildings which are intended for religious services or functions, such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings**—Includes all buildings which are used directly in administrative and instructional activities, such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories which are not a part of a manufacturing establishment, are also included.
- **Hospitals and institutional buildings**—Includes all buildings which are intended to provide hospital and institutional care, such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Farm buildings, nonresidential**—Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings**—Includes buildings which are used primarily for entertainment, social and recreational activities, such as sports arenas, theaters, music halls, golf and country club buildings, skating rinks, bowling alleys, and indoor swimming pools.
- **Other nonresidential buildings**—Includes nonresidential buildings which are not classified elsewhere, such as fire stations, prisons, civic centers, bus and air passenger terminals and hangars.

Nonbuilding construction:

- **Highways, streets and related work, such as installation of guardrails, highway signs, etc.**—Includes streets, roads, alleys, sidewalks, curbs and gutters, culverts, right-of-way drainage, erosion control and lighting. Also includes earthwork protective structures when used in connection with road improvements.
- **Outdoor swimming pools**—Includes wading pools and reflecting pools.
- **Recreational facilities**—Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Bridges and elevated highways**—Includes viaducts and overpasses; roads, highways, railroads, and causeways built on structural supports.
- **Tunnels**—Includes highway, pedestrian, and railroad tunnels.
- **Railroad construction**—Includes the construction of railroad beds, tracks, freight yards, and signal towers.
- **Subway construction**—Includes urban mass transit subway systems above or below ground.
- **Dam and reservoir construction**—Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Marine construction**—Includes dredging, underwater rock removal, breakwaters, navigational channels, jetties, and locks.
- **Harbor and port facilities**—Includes docks, piers, and wharves.
- **Conservation and development construction**—Includes land reclamation, irrigation projects, drainage canals, levees, and flood control projects.
- **Power and communication transmission lines, towers, and related facilities**—Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, electric light and power facilities.
- **Power plants, except nuclear**—Includes electric and steam generating plants.
- **Power plants, nuclear**—Includes atomic energy plants, and nuclear reactors.
- **Sewers, sewerlines, and related facilities**—Includes sanitary and storm sewers, and related facilities.
- **Sewage treatment plants**—Includes sewage treatment and waste disposal plants.
- **Water mains and related facilities**—Includes water supply systems and related facilities.

- **Water treatment plants**—Includes water filtration and water softening plants.
- **Pipeline construction other than sewer or waterlines**—Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.
- **Blast furnaces, petroleum refineries, chemical complexes, etc.**—Includes coke ovens, and mining appurtenances such as tipples and washeries.
- **Other nonbuilding construction**—Includes all types of nonbuilding construction, not included elsewhere.

APPENDIX B.

Standard Industrial Classification Titles for Industry Groups and Industries

SIC code	Industry titles	SIC code	Industry titles
15	BUILDING CONSTRUCTION—GENERAL CONTRACTORS AND OPERATIVE BUILDERS	17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS—Con.
152	General Building Contractors—Residential Buildings	173	Electrical Work Special Trade Contractors
1521	General Contractors—Single-Family Houses	1731	Electrical Work Special Trade Contractors
1522	General Contractors—Residential Buildings, Other Than Single-Family	174	Masonry, Stone Work Tile Setting, and Plastering Special Trade Contractors
153	Operative Builders	1741	Masonry, Stone Setting, and Other Stone Work Special Trade Contractors
1531	Operative Builders	1742	Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors
154	General Building Contractors—Nonresidential Buildings	1743	Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors
1541	General Contractors—Industrial Buildings and Warehouses	175	Carpentry and Floor Work Special Trade Contractors
1542	General Contractors—Nonresidential Buildings, Other Than Industrial Buildings and Warehouses	1751	Carpentry Work Special Trade Contractors
16	HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION—CONTRACTORS	1752	Floor Laying and Other Floor Work Special Trade Contractors, Not Elsewhere Classified
161	Highway and Street Construction, Except Elevated Highways	176	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
1611	Highway and Street Construction Contractors, Except Elevated Highways	1761	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
162	Heavy Construction, Except Highway and Street Construction	177	Concrete Work Special Trade Contractors
1622	Bridge, Tunnel, and Elevated Highway Construction Contractors	1771	Concrete Work Special Trade Contractors
1623	Water, Sewer, Pipeline, and Communications and Powerline Construction	178	Water Well Drilling Special Trade Contractors
1629	Heavy Construction, Not Elsewhere Classified	1781	Water Well Drilling Special Trade Contractors
17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS	179	Miscellaneous Special Trade Contractors
171	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1791	Structural Steel Erection Special Trade Contractors
1711	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1793	Glass and Glazing Work Special Trade Contractors
172	Painting and Paper Hanging Special Trade Contractors	1794	Excavation Work Special Trade Contractors
1721	Painting and Paper Hanging Special Trade Contractors	1795	Wrecking and Demolition Work Special Trade Contractors
		1796	Installation or Erection of Building Equipment, Special Trade Contractors, Not Elsewhere Classified
		1799	Special Trade Contractors, Not Elsewhere Classified
		6552	LAND SUBDIVIDERS AND DEVELOPERS, EXCEPT CEMETERIES

APPENDIX C.

Geographic Divisions and States

NEW ENGLAND STATES

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

MIDDLE ATLANTIC STATES

New Jersey
New York
Pennsylvania

EAST NORTH CENTRAL STATES

Illinois
Indiana
Michigan
Ohio
Wisconsin

WEST NORTH CENTRAL STATES

Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

SOUTH ATLANTIC STATES

Delaware
District of Columbia
Florida
Georgia
Maryland

SOUTH ATLANTIC STATES—Con.

North Carolina
South Carolina
Virginia
West Virginia

EAST SOUTH CENTRAL STATES

Alabama
Kentucky
Mississippi
Tennessee

WEST SOUTH CENTRAL STATES

Arkansas
Louisiana
Oklahoma
Texas

MOUNTAIN STATES

Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

PACIFIC STATES

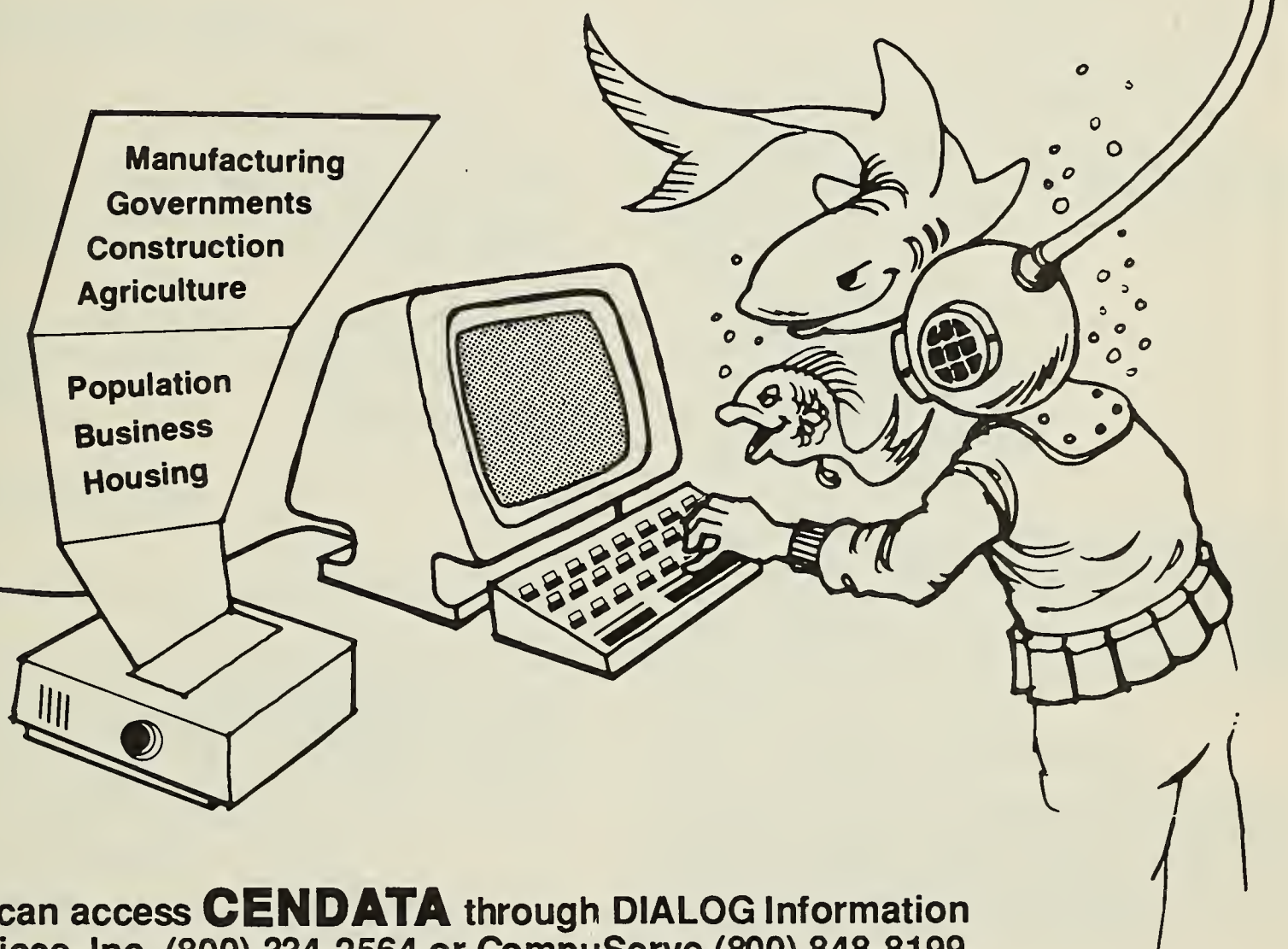
Alaska
California
Hawaii
Oregon
Washington

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PUBLICATION PROGRAM

1987 CENSUS OF CONSTRUCTION INDUSTRIES

The Census of Construction Industries is taken once every 5 years. The census covers all establishments engaged in construction, including:

- Building contractors
- Heavy construction contractors
- Special trade contractors (including plumbers, carpenters, painters, electricians)
- Land developers and subdividers

Data products in the Census of Construction Industries are issued in 4 publication series and in 3 other media:

- Printed reports [P]
- CD-ROM [C]
- Computer tape [T]
- Highlights online [+]

Preliminary Industry Series (CC87-I-1(P) through CC87-I-28(P))

(Available November 1988 through May 1989) [P]

Twenty-seven separate industry reports and a United States summary report, providing national statistics for establishments with payroll. Statistics shown for 1987 include:

- Number of establishments
- Number of employees
- Payroll
- Hours worked
- Value of construction work done, by type of structure
- Selected operating costs

Final Industry Series (CC87-I-1 through CC87-I-28)

(Available June 1989 through November 1989) [P] [C] [T] [+]

Twenty-seven separate industry reports and a United States summary report, providing statistics for the Nation and individual States on establishments with payroll. These reports update figures from the preliminary industry series (employment, payroll, value of construction, etc.) and provide measures of the following:

- Capital expenditures
- Inventories
- Industry profiles
- Assets
- Depreciation
- And much more

Geographic Area Series (CC87-A-1 through CC87-A-10)

(Available January 1990 through March 1990) [P] [C] [T] [+]

Nine reports on the construction industries, representing each census geographic division, and a United States summary report. Regional reports provide detailed data for States and metropolitan statistical areas.

Subject Report—Legal Form of Organization and Type of Operation (CC87-S-1)

(Available May 1990) [P]

One report providing selected national statistics for each industry by legal form of organization and type of operation. This report includes data for establishments with and without payroll. Data in this report include—

- Employment
- Payroll
- Value of construction work done
- Selected operating costs

OTHER ECONOMIC CENSUSES REPORTS

The Census of Construction Industries is part of the 1987 Economic Censuses. These are conducted at five-year intervals in years ending in 2 and 7 and consist of seven separate censuses:

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction

...plus several related programs: enterprise statistics; information on minority-owned and women-owned businesses; and the Census of Outlying Areas, including separate economic censuses of Puerto Rico and other outlying areas. The Census of Agriculture and Census of Governments are conducted separately.

HOW TO ORDER DATA PRODUCTS

Order forms for the specific reports and other data products may be obtained from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233. If you have any questions, call Census Customer Services 1-(301)-763-4100.



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CC87-I-15 Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors

1987 Census of C

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Industries